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# R E P O R T

FOR THE

YEAR 1897,

20 OCT. 98

UPON THE

VITAL & SANITARY CONDITION

OF THE

ADMINISTRATIVE COUNTY OF MIDDLESEX

BASED UPON THE

REPORTS OF THE DISTRICT MEDICAL OFFICERS  
OF HEALTH, REGISTRAR-GENERAL'S  
RETURNS, ETC.

BY

JOHN F. J. SYKES, D.Sc., M.D.

London :

HARRISON AND SONS, ST. MARTIN'S LANE,

*Printers in Ordinary to Her Majesty.*

1898.







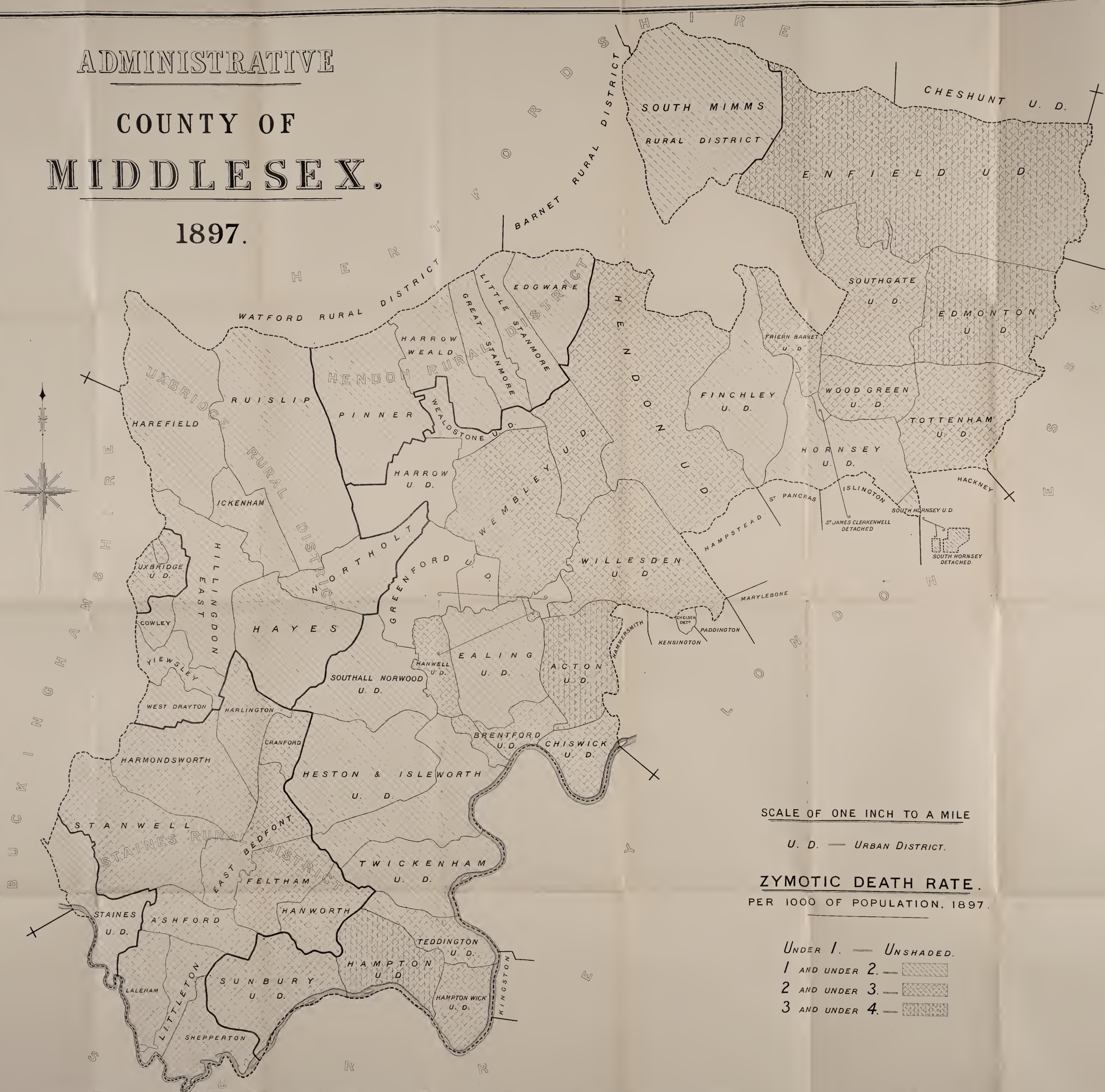
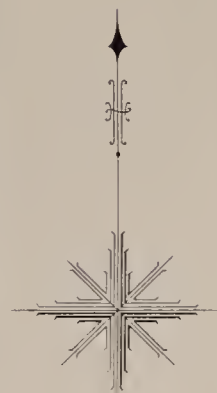


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# ADMINISTRATIVE COUNTY OF MIDDLESEX.

1897.



SCALE OF ONE INCH TO A MILE

U. D. — URBAN DISTRICT.

ZYMOTIC DEATH RATE.  
PER 1000 OF POPULATION, 1897.

Under 1. — Unshaded.  
1 AND UNDER 2. —   
2 AND UNDER 3. —   
3 AND UNDER 4. —

County Council of Middlesex.

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# REPORT

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BY

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1898.



# CONTENTS.

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	PAGE
Map of the Administrative County of Middlesex, showing the areas of the Urban and Rural Districts and Rural Parishes, and the Incidence of Zymotic Mortality during the year.	
Introduction .. .. .	5
PART I.—THE COUNTY.	
CHAPTER I.—VITAL STATISTICS.	
Public Institutions.—Population.—Births and birth-rates.—Deaths and death-rates.—Ages at death.—Causes of death—Inquests. .. .. .	7
CHAPTER II.—INFECTIOUS DISEASES.	
Section 1. Notification and diseases.—Section 2. Isolation Hospitals and Ambulances.—Section 3. Disinfection and methods.—Section 4. Vaccination .. .. .	27
CHAPTER III.—SANITATION.	
Sanitary work generally .. .. .	73
Inspections.—Complaints.—Infectious diseases notified.—Premises periodically inspected. — House-to-house inspections .. .. .	73
Dwellings. — Dwelling-houses. — Houses let in separate dwellings.—Common lodging-houses.—Canal boats used as dwellings.—Movable dwellings .. .. .	74
Public Baths.—Schools.—Workshops and work places.—Laundries.—Bakehouses .. .. .	79
Slaughter-houses.—Cow-sheds, dairies and milkshops ..	82
Food.—Unsound food.—Adulterated food .. .. .	83
Offensive trades.—Mortuaries—Burial grounds, etc. ..	83
Water supply and water service. — Sources. — Wells. — Waterworks. — Intermittent and constant supplies ..	84
Drainage and sewerage.—Privies and cesspits.—Water-closets.—Drains.—Sewers.. .. .	88

	PAGE
Sewage disposal. . . . .	90
Pollution of streams . . . . .	91
Scavenging.—Refuse storage and removal, and refuse disposal . . . . .	95
Legislation.—Acts, Bye-laws, and Regulations . . . . .	97

PART II.—SUMMARIES OF THE REPORTS OF THE MEDICAL OFFICERS OF HEALTH OF THE DISTRICTS OF THE COUNTY, URBAN AND RURAL, IN ALPHABETICAL ORDER..	99
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PART III.—STATISTICAL TABLES ..	143
---------------------------------	-----

Table A.—Table of deaths occurring during the year in the Districts of the County of Middlesex, classified according to diseases, ages, and localities:

Table B.—Table of populations, births, and of new cases of infectious sickness during the year in the Districts of the County of Middlesex, classified according to diseases, ages, and localities.

Tables C (I), (II), (III), (IV).—Tables of sanitary work carried out during the year in the Districts of the County of Middlesex, classified according to subjects and localities.

# County Council of Middlesex.

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TO THE CHAIRMAN AND MEMBERS OF THE  
GENERAL PURPOSES COMMITTEE.

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GENTLEMEN,

I have the honour to present to you the Report for the year 1897, upon the health conditions of the Administrative County of Middlesex.

The number of Annual Reports received from the Medical Officers of Health of the Urban and Rural Districts of the Administrative County has been 33, the last having been received on the 1st June. Of these Reports, 31 are printed, and 2 type-written, namely, those of Greenford and Hanwell.

The forms supplied by the Local Government Board (Tables A and B, Part III) accompany, or are inserted in the text, of all the Reports, except in the case of that of South Hornsey. In one or two Reports the tables are so subdivided as to be difficult to extract.

The Tables C (I), (II), (III), (IV), [Part III] of sanitary work accomplished, either in full or abbreviated, in manuscript or in print, accompany or are appended to 25 of the 33 Reports. In the Reports of Acton, Ealing, South Hornsey, Hendon Rural, South Mimms Rural, and Uxbridge Rural Districts, different forms or classifications are adopted, so that they are difficult to extract, and, in the case of the last-mentioned, impossible. Harrow and Sunbury make no return of sanitary work.

The tables in the text relating to the notification of infectious diseases, isolation hospitals, ambulances, and disinfecting chambers have been brought up to date.

The map prefacing the Report shows, in a graphic form, the incidence of the mortality of the principal zymotic diseases during the year in each of the Districts of the County.

As in previous years, the Report has been divided into three parts: the first relating to the County as a whole, the second containing summaries of the Reports of the Medical Officers of Health of the Districts, and the third containing the statistical tables.

I would beg to direct special attention to the section upon Vaccination, in Chapter II.

I have the honour to be,

Gentlemen,

Your obedient Servant,

JOHN F. J. SYKES.

40, Camden Square, N.W.

## PART I.—THE COUNTY.

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### CHAPTER I.—VITAL STATISTICS.

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#### SECTION 1.—PUBLIC INSTITUTIONS.

As in previous years, it is necessary in the first place to take account of the public institutions. These institutions give rise to many troubles and complications. The diverse manner in which they are treated is confusing; in one District the population, births, and deaths in the workhouse are all included in the statistics, in another all excluded, in a third, part included and part excluded, in a fourth, the population and births are included, and the deaths excluded, so that no uniform method is adopted.

To the Report for the year 1892 was appended a list of those public institutions in the County of Middlesex taken into account by the Registrar-General in the Returns of the Census of 1891. In the Report for 1893, a more or less complete account of the public institutions in the County was given, and their effect upon the statistics of the County discussed. In the Report for 1894 the method of treating them, and the effects of public institutions were further discussed, and again further in the 1895 and 1896 Reports.

Briefly, the conclusions come to were that the population, births, and deaths in hospitals, asylums, and workhouses

not belonging to the County, or any District of the County, should be altogether excluded. That all schools and homes, and those hospitals, asylums, and workhouses belonging to the County or any District of the County should be included.

With regard to exclusion, the course indicated is now generally followed. With regard to inclusion, schools and homes are now generally included, hospitals are wholly or partly included in the Districts to which their inmates belong, the asylum is situated outside the County, but difficulty is experienced in reference to workhouses.

In a few instances the proportion of population, births, and deaths, with their ages and causes, which have been excluded from the District in which the Union Workhouse is situated, have been included in the proper District of the Union to which they belong, but this method is not generally adopted. In fact, the methods are so diverse that it is difficult to reduce them to uniform figures. Some idea may be obtained of this by referring to the accompanying table, which is an attempt to tabulate the population, births, and deaths in the workhouses of the Unions and the Districts to which they should be distributed.

It has been pointed out that the best way to overcome this difficulty of distribution would be for each workhouse to issue at the end of the year a summary of its statistics, on Forms A and B, giving in the forms the figures with regard to each Sanitary District of the Union stated as separate localities, and to supply each of these separate localities, or Districts, with a copy, and if the County Council were also supplied with copies of the Returns

from all the Union workhouses, a complete account of the statistics of Unions stated separately and conjointly could appear in the Annual Report.

#### POPULATION IN PUBLIC INSTITUTIONS.

The population of each of the workhouses, as far as they could be approximately ascertained, was stated in the Report of 1893. In the adjoining table and in the summaries in this Report, the populations will be found stated where recorded in the Reports of the Districts for the year 1896.

#### BIRTHS IN PUBLIC INSTITUTIONS.

The number of births that have taken place in workhouses have been recorded where found stated in the District Reports.

#### DEATHS IN PUBLIC INSTITUTIONS.

In a similar manner the deaths in workhouses have been treated, but it must be remarked that to include the population and births and to exclude the deaths does not conduce to accurate statistics. In short, unless the whole facts are stated completely with regard to public institutions, and the necessary corrections made in the District Reports, it is difficult to deal with them in the completest manner, although the results may be regarded as approximately comparable.

At the foot of Table A, table of deaths, on the form supplied by the Local Government Board for the purpose of recording the mortality of a District, are two additional lines, one for recording the "deaths occurring outside the District amongst persons belonging thereto," and the other

for recording the “deaths occurring within the District amongst persons not belonging thereto,” and above these two lines, and separating them from the table above them, are the words “the subjoined numbers *have also to be taken into account* in judging of the above record of mortality.” Table A becomes a more complete and accurate table if the words italicised are altered to “*have been taken into account*,” and the corrections and alterations are actually made in the table above, summarised in the two lines below, and described in detail in the text of the Report. This method affords more complete information, and the corrections are distributed to their proper localities, a transfer which none but the medical officer of health of the District can perform correctly.

# COUNTY OF MIDDLESEX.

## POOR LAW UNION WORKHOUSES AND THE DISTRICTS COMPOSING THE UNIONS.

WORKHOUSES AND DISTRICTS. (W = District in which Workhouse is situated.)	Daily average number of Inmates.	Births.	Deaths.	—
EDMONTON UNION WORKHOUSE ..	650	47	147	Stated in Edmonton Report.
Edmonton Urban District (W) ..	162	11	30	
South Hornsey " ..	23	2	6	
Hornsey " ..	48	6	23	
Wood Green " ..	52	3	11	
Tottenham " ..	220	15	44	
Southgate " ..	19	2	9	
Enfield " ..	76	4	15	
(Herts) Cheshunt Urban District ..	31	4	6	
(Essex) Waltham Holy Cross Urban Dist.	19	—	3	
HENDON UNION WORKHOUSE ..	128	30	96	
Hendon Urban District (W) ..	64	6	20	
Willesden " ..	—	—	—	
Harrow " ..	}	—	—	
Wealdstone " ..		—	—	
Wembley " ..		—	—	
Hendon Rural District ..				Outside the County.
				Stated in Edmonton Report.

Poor Law Union Workhouses and the Districts composing the Unions —continued.

WORKHOUSES AND DISTRICTS. (W = District in which Workhouse is situated.)	Daily average number of Inmates.	Births.	Deaths.	—
BRENTFORD UNION WORKHOUSE .. Heston & Isleworth Urban District (W)	(?) (?)	(?) (?)	(?) (?)	Stated in Heston and Isleworth Report.
Greenford Urban District ..				
Acton ..				
Ealing ..				
Hanwell ..				
Chiswick ..				
Brentford ..				
Twickenham ..				
STAINES UNION WORKHOUSE ..	194	(?)	32	All stated and included in the Staines Rural District Report.
Staines Rural District (W) ..	—	—	—	
Sunbury Urban District ..	—	—	—	
Staines ..	—	—	—	
UXBRIDGE UNION WORKHOUSE ..	190	(?)	36	Stated in Report of Uxbridge Rural District.
Uxbridge Rural District (W) ..	32	—	2	
Uxbridge Urban District ..	—	—	—	
Southall-Norwood Urban District ..	—	—	—	



## POPULATION OF THE DISTRICTS AND OF THE COUNTY.

It will be observed that the changes of areas consequent upon the Local Government Act, 1894, and first introduced into the Report for 1894, are permanent and remain the same in this Report, there being 29 Urban Districts and four Rural Districts in the County. It is unnecessary to detail the changes, as they were fully set out in the Report for 1894.

As in previous Reports, the estimate of population made by the Medical Officer of Health, with his local knowledge, has been taken as the basis for the statistics of each District, and collectively for the County. The difficulty of making such estimates may be illustrated by a quotation :—

Dr. C. D. Green (Edmonton Urban District) reports “The longer the time that has elapsed since the last census, the greater is the probable error in an estimate of population, especially in such a district as this, where building operations have been extensively carried on for years, and are still in progress, and where immigration is obviously the chief factor in the increase of population.

“There can be no doubt, however, that immigration consequent on building operations, was also the chief cause of the increase that took place between 1881 and 1891; from the figures supplied in the 1891 census return, it was deduced that there were on an average 6·1 persons to each inhabited house; now the number of inhabited houses in the district shown on the rate books for 1897 is 5,527, and, if we assume that the average number of persons per house is the same as in 1891, we should get the number of inhabitants by multiplying 5,527 by 6·1,

this gives 33,714 as the estimate of population, a result fairly in accordance with that obtained by the other method, 33,804."

#### BIRTHS.

The highest birth-rate occurred in the Greenford Urban District, 43·9 per 1,000 of population; followed by Brentford Urban, 38·9; Hanwell Urban, 33·5; Uxbridge Rural, 33·0; Edmonton Urban, 32·3; Southall Norwood Urban, 32·1; and Willesden Urban, 31.

The lowest birth-rate per 1,000 of population occurred, as in previous years, in the Ealing Urban District, 17·8; followed by Hampton Wick Urban, 18·4; and Hendon Rural District, 19·7.

The birth-rates per 1,000 of population of the Urban Districts, the Rural Districts, the County, England and Wales, London, and the 33 great towns, are set out in the following table for comparison:—

Localities.	Population.	Births.	Birth-Rates.
Urban Districts .. ..	642,108	17,862	27·8
Rural Districts .. ..	44,681	1,275	28·5
Administrative County ..	686,789	19,137	27·9
England and Wales .. ..	31,397,078	921,104	29·7
London .. ..	4,463,169	133,618	30·0
33 great towns .. ..	10,992,524	336,740	30·7

NOTE.—The figures for Middlesex in this and the following similar tables in this chapter are taken from Table A

in Part III, to which reference may be made as to what is included, and what is excluded. Friern Barnet has been omitted from the Urban Districts and Administrative County in the tables of this chapter.

### DEATHS.

The highest death-rate was recorded in the Uxbridge Urban District, 16·2 per 1,000 of population; followed by Edmonton Urban, 15·9; Acton Urban, 15·9; Staines Rural, 15·6; Brentford Urban, 15·6; and Uxbridge Rural District, 15·1.

The lowest death-rate was recorded in Harrow Urban District, 8·0 per 1,000; followed by Hornsey Urban, 8·4; Ealing Urban, 9·3; Wealdstone Urban, 9·7; Wembley Urban, 9·8; and Hendon Rural District, 9·9.

The following table gives the death-rates per 1,000 of population in the Urban Districts, the Rural Districts, the County, England and Wales, London, and the 33 great towns:—

Localities.	Population.	Deaths.	Death-Rates.
Urban Districts .. ..	642,198	8,245	12·8
Rural Districts .. ..	44,681	635	14·2
Administrative County ..	686,789	8,880	12·9
England and Wales ..	31,397,078	541,426	17·4
London .. ..	4,463,169	80,943	18·2
33 great towns .. ..	10,992,524	209,412	19·1

The death-rate of the Urban Districts is the same, of the Rural Districts 1·7 per 1,000 higher, and of the County 0·1 higher, than in the previous year; and that of London 0·4 lower, of England and Wales 0·3 higher, and of the 33 great towns 0·2 higher than in 1896.

The rise in the mortality of the Rural Districts appears to be due to the fatality of infantile zymotic diseases, especially in the Staines Rural District.

#### AGES AT DEATH.

The infantile mortality, or deaths under 1 year of age, to every 1,000 births, is a most accurate test of the mortality of infants, because the correct number of births and deaths are known as a basis for the calculation.

The highest infantile death-rate was recorded in Acton Urban District, 198 per 1,000 births; followed by Sunbury Urban, 195; Hendon Urban, 188; Edmonton Urban, 167; Twickenham Urban, 166; Tottenham Urban, 163; and Wood Green Urban District, 160.

The lowest rate was recorded in Hampton Wick Urban District, 45; followed by Greenford, 59; Harrow Urban, 71; Hendon Rural, 72; South Mimms Rural, 98; and Wembley Urban District, 98.

The infantile mortality rates per 1,000 births are shown below, comparing the same localities as the previous tables:—

Localities.	Births.	Deaths under 1 year.	Infantile Mortality Rate per 1,000 Births.
Urban Districts .. ..	17,862	2,626	147
Rural Districts .. ..	1,275	158	124
Administrative County ..	19,137	2,784	145
England and Wales. . .	921,104	143,814	156
London .. ..	133,618	21,273	159
33 great towns .. ..	336,740	59,591	177

In reference to infantile mortality, Dr. J. D. Windle (Southall-Norwood Urban District) writes:—

“These deaths are called preventable deaths, since it is reasonable to conclude that if proper care in feeding was exercised in every case where it is required their number would be very considerably reduced.

“In previous reports I have urged the desirability of distributing pamphlets dealing with artificial feeding and management of infants, and for this purpose I have formulated the following rules, so that a copy of these may be given to parents on the registration of infants in this District:—

- “1. The mother’s milk is the natural and proper food for an infant for the first 8 or 9 months of life. Up to this period the necessary juices to digest any other food than milk are not formed,

so that bread, biscuits, rusks and all other starchy foods must be strictly avoided, even if mixed with milk.

- “ 2 If for any reason the infant cannot be nursed, cow’s milk is the next best food. The milk should be boiled before use. For the first two months there should be twice as much water as milk, a piece of sugar to sweeten it, and a pinch of salt added. From two to three months use equal parts of milk and water. From three to six months one-third part of water.
- “ 3. Times for feeding and amount of food :—For the first month a baby should be fed every two hours in the daytime, one to two ounces of food prepared as above being given each time. By gradually increasing the interval he is in time fed every three hours (between the ages of three and four months), and eventually four hours at the age of six to eight months.
- “ 4. When eight months old the baby may be allowed, in addition to milk, boiled bread and milk, baker’s rusks, oatmeal, arrowroot or wheat-flour. When about nine months old he should have less of the mother’s milk or bottle and more of these foods, or a little beef tea or mutton broth.
- “ 5. Weaning :—At one year old the baby should be entirely weaned, and soon should have every day a little under cooked meat pounded to a pulp, with gravy and salt, or a little milk pudding. On no account should he be allowed wine, beer, spirits, tea or coffee, though he may have cocoa and milk.

“ 6. Meals should be given regularly, and he should not be allowed to pick at bread, cake, sweets, fruit, &c., between meals.

“ 7. The best bottle to use is the old fashioned, long, straight one, with a short india-rubber teat; it is often called the slipper or boat bottle. It is so designed that it can be kept perfectly clean with a minimum of attention. The worst kind of bottle is that with a long india-rubber tube, named the Alexandra and other fanciful names; it would be fitly named the infant's death trap. A 'foul bottle' is the most common cause of diarrhœa.

“ The worst nourished, fat, flabby, rickety children are those brought up on Swiss milk and the various patent starchy foods. Every day, and twice a-day if possible, the child should be taken into the fresh air, unless there be a cold fog, wind or rain.

“ It should be washed all over night and morning in warm water.

“ No child should ever be put in a cold bath.

“ Woollen clothing should always be worn next the skin.

“ A child cannot be hardened by scanty clothing and cold baths.

“ Neck, arms and legs should be covered as well as the chest and body.”

ADMINISTRATIVE COUNTY OF MIDDLESEX, 1897.

Districts.	Estimated Population, 1897.	Births, 1897.	Birth- Rate.	Deaths, 1897.	Death- Rate.	Deaths under 1 year, 1897.	Infantile Mortality per 1,000 Births.	Notes.
URBAN.								
Acton ..	31,632	973	30·7	503	15·9	193	198	These figures are taken from the Summaries in Part II., to which reference may be made as to what is in- cluded, and what is excluded.
Brentford ..	14,806	576	38·9	231	15·6	83	144	
Chiswick..	25,972	789	30·4	348	13·4	105	133	
Ealing ..	33,000	589	17·8	308	9·3	63	107	
Edmonton ..	33,966	1,099	32·3	542	15·9	184	167	
Enfield ..	37,500	1,086	28·9	546	14·6	167	154	
Finchley..	20,064	501	24·9	205	10·2	51	102	
Friern Barnet ..	—	—	27·2	—	12·4	—	131	
Greenford ..	773	34	43·9	8	10·2	2	59	
Hampton ..	6,000	163	27·2	80	13·3	26	159	
Hampton Wick..	2,378	44	18·4	33	13·8	2	45	
Hanwell ..	6,773	227	33·5	86	12·6	29	128	
Harrow ..	8,777	196	22·3	72	8·0	14	71	
Hendon ..	19,696	557	29·3	284	14·5	105	188	
Heston and Isleworth ..	28,765	729	25·3	390	13·5	96	132	
Hornsey ..	65,130	1,337	20·5	548	8·4	138	103	

# Administrative County of Middlesex, 1897—continued.

22

Districts.	Estimated Population, 1897.	Births, 1897.	Birth- Rate.	Deaths, 1897.	Death- Rate.	Deaths under 1 year, 1897.	Infantile Mortality per 1,000 Births.	Notes.
Southall-Norwood	7,913	254	32.1	106	13.4	28	110	These figures are taken from the Summaries in Part II., to which reference may be made as to what is in- cluded, and what is excluded.
Southgate	13,000	326	25.0	158	12.1	48	147	
South Hornsey	17,200	418	24.3	238	13.8	47	112	
Staines	5,807	177	30.4	64	11.0	19	107	
Sunbury	4,500	118	26.2	65	12.2	23	195	
Teddington	13,000	294	22.6	156	12.0	42	143	
Tottenham	87,180	2,643	30.3	1,199	13.6	430	163	
Twickenham	18,500	495	29.2	256	13.8	82	166	
Uxbridge	8,739	227	26.0	142	16.2	34	140	
Wealdstone	3,600	88	24.4	35	9.7	11	125	
Wembley	4,480	92	20.5	44	9.8	9	98	
Willesden	92,979	2,887	31.0	1,343	14.4	444	154	
Wood Green	30,500	939	30.8	384	12.5	151	160	
RURAL.								
Hendon	7,755	153	19.7	77	9.9	11	72	
Staines	19,270	561	29.1	301	15.6	80	143	
South Mimms	2,548	71	23.9	29	11.7	7	98	
Uxbridge	15,108	490	33.0	228	15.1	60	122	

## CAUSES OF DEATH.

As in previous years, it is desirable to set out the two classes of diseases known as the "principal zymotic diseases," and the "scheduled notifiable infectious diseases," in order to avoid error and to show what is embraced in each class and how far they coincide and differ:—

Principal Zymotic Diseases.	Scheduled Notifiable Infectious Diseases.
Smallpox Scarlet Fever Diphtheria or Membranous Croup Typhus Fever Enteric Fever Continued Fever  Measles Whooping Cough Diarrhoea and Dysentery	Smallpox Scarlatina or Scarlet Fever Diphtheria and Membranous Croup Typhus Fever Enteric or Typhoid Fever Continued Fever  Relapsing Fever Puerperal Fever Cholera Erysipelas

In the following table the deaths and death-rates from each of the two classes of disease in each of the Districts of the County, Urban and Rural, are set out for the purpose of comparison.

## ADMINISTRATIVE COUNTY OF MIDDLESEX, 1897.

Districts.	Estimated Population 1897.	Deaths from scheduled noti- fiable diseases.	Death- Rate per 1,000 Pop.	Deaths from principal zymotic diseases.	Death- Rate per 1,000 Pop.	Notes.
URBAN.						
Acton .. ..	31,632	30	0·95	112	3·5	These figures are taken from Table A, Part III., to which reference may be made as to what is in- cluded, and what ex- cluded; ex- cept Friern Barnet, which is taken from the summa- ries, Part II.
Brentford .. ..	14,806	9	0·61	38	2·5	
Chiswick .. ..	25,972	22	0·85	57	2·2	
Ealing .. ..	33,000	10	0·30	33	1·0	
Edmonton .. ..	33,966	28	0·82	125	3·7	
Enfield .. ..	37,500	31	0·83	138	3·7	
Finchley .. ..	20,064	3	0·15	34	1·7	
Friern Barnet .. ..	..	..	..	..	2·7	
Greenford .. ..	773	0	0·0	0	0·0	
Hampton .. ..	6,000	2	0·33	18	3·0	
Hampton Wick .. ..	2,378	3	1·26	5	2·1	
Hanwell .. ..	6,773	7	1·03	15	2·2	
Harrow .. ..	8,777	2	0·23	5	0·6	
Hendon .. ..	19,696	14	0·71	52	2·6	
Heston and Isleworth .. ..	28,765	12	0·42	37	1·3	
Hornsey .. ..	65,082	23	0·35	67	1·1	
Southall-Norwood .. ..	7,913	4	0·51	15	1·9	
Southgate .. ..	13,000	2	0·15	28	2·1	
South Hornsey .. ..	17,200	9	0·52	29	1·7	
Staines .. ..	5,807	0	0·0	6	1·0	
Sunbury .. ..	4,500	5	1·11	11	2·4	
Teddington .. ..	13,000	5	0·38	30	2·3	
Tottenham .. ..	87,180	53	0·61	187	2·1	
Twickenham .. ..	18,500	14	0·76	32	1·7	
Uxbridge .. ..	8,789	12	0·14	21	2·4	
Wealdstone .. ..	3,500	1	0·29	5	1·4	
Wembley .. ..	4,480	1	0·22	9	2·0	
Willesden .. ..	92,605	101	1·09	270	2·9	
Wood Green .. ..	30,500	15	0·49	85	2·8	
RURAL.						
Hendon .. ..	7,755	6	0·77	10	1·3	
Staines .. ..	19,270	6	0·31	53	2·7	
South Mimms .. ..	2,540	0	0·0	3	1·2	
Uxbridge .. ..	15,108	7	0·46	27	1·8	

The highest zymotic death-rate was recorded in Edmonton Urban District, 3·7 per 1,000 of population; followed by Enfield Urban, 3·7; Acton Urban, 3·5; and Hampton Urban District, 3·0.

The lowest zymotic death-rate was recorded in Greenford Urban District, 0·0; followed by Harrow Urban, 0·6; Ealing Urban, 1·0; Staines Urban, 1·0; Hornsey, 1·1; and South Mimms Rural District, 1·2.

The deaths and death-rates from the principal zymotic diseases in certain localities are shown for comparative purposes in the following table:—

Localities.	Population.	Deaths from Zymotic Diseases.	Zymotic Death- Rate.
Urban Districts .. ..	642,108	1,464	2·28
Rural Districts .. ..	44,681	93	2·08
Administrative County ..	686,789	1,557	2·26
England and Wales .. ..	31,397,078	67,051	2·15
London .. ..	4,463,169	11,525	2·58
33 great towns .. ..	10,992,524	31,479	2·87

The map prefacing this Report shows the various Districts of the County, shaded to show the incidence of zymotic mortality during the year.

The highest recorded mortality from the scheduled notifiable diseases occurred in Hampton Wick Urban District, 1·26 per 1,000 of population ; followed by Sunbury Urban, 1·11; Willesden Urban, 1·09 ; and Hanwell Urban, 1·03.

In the Staines Urban, the Greenford Urban, and the South Mimms Rural District there were no deaths from these diseases.

The number of deaths and the death-rates of the notifiable infectious diseases are shown below, in tabular form, for comparison.

Localities.	Population.	Deaths from Notifiable Diseases.	Notifiable Diseases. Death- Rates.
Urban Districts .. ..	642,108	418	0·65
Rural Districts .. ..	44,681	19	0·42
Administrative County ..	686,789	437	0·63

## CHAPTER II. — INFECTIOUS DISEASES.

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### SECTION 1.—NOTIFICATION AND DISEASES.

THE notification of infectious disease is in force in every District of the Administrative County. In the Willesden District compulsory notification has been in force since 1887 under a Local Act, but in all the other Districts the Infectious Diseases (Notification) Act, 1889, was adopted between 1889 and 1892. The date when notification came into force in each District is stated in the table below. The Act was in force in Sunbury in 1890, prior to its separation from the Staines Rural District, and in Wealdstone and Wembley in 1891, prior to their severance from the Hendon Rural District.

It will be observed that, prior to or in 1894, Friern Barnet, Hampton, Hendon, Heston and Isleworth Urban Districts, and Hendon Rural District, added measles to the notifiable diseases scheduled in the Act, and that Hendon Urban District also added whooping-cough; that the resolutions making these diseases notifiable were rescinded or expired in 1894, in the Heston and Isleworth Urban and the Hendon Rural Districts, and, in 1896, in the Friern Barnet Urban, and Hendon Urban Districts; and that they were again adopted, in 1896, in the Friern Barnet Urban, and Heston and Isleworth Urban Districts. In the number of cases notified and quoted in the third column of the table below, measles and whooping-cough have not been included.

To the table below is also added a column in reference to the Infectious Diseases (Prevention) Act, 1890, and a note made where adopted, to which the dates will be added when known :—

## NOTIFICATION OF INFECTIOUS DISEASES.

Districts.	Since when notification in force?	Cases of scheduled diseases notified, 1896.	Diseases added to those scheduled in Act.	Infectious Diseases (Prevention) Act adopted?
URBAN.				
Acton .. ..	Jan., 1890	221		
Brentford .. ..	Dec., 1889	181		
Chiswick .. ..	Jan., 1890	176		
Ealing .. ..	Jan., 1890	156		
Edmonton .. ..	March, 1891	323		
Enfield .. ..	Jan., 1890	320		
Finchley .. ..	Jan., 1890	104	..	Yes.
Friern Barnet .. ..	Jan., 1891	—	{ Measles, Oct., 1894, for 2 years, and again added end of 1896.	Yes.
Greenford .. ..	1892	1		
Hampton .. ..	1890	17	Measles.	
Hampton Wick .. ..	Feb., 1890	13		
Hanwell .. ..	March, 1890	115		
Harrow .. ..	1890	36		
Hendon .. ..	1891	94	{ Measles and whooping-cough, 1894, rescinded Dec., 1896.	
Heston and Isleworth	Jan., 1890	184	{ Measles, rescinded 1894, again added Sept., 1896.	
Hornsey .. ..	Jan., 1890	426		
Southall-Norwood .. ..	July, 1891	152	..	Yes.
Southgate .. ..	Dec., 1889	97		
South Hornsey .. ..	Sept., 1892	94		
Staines .. ..	1890	25		
Sunbury .. ..	Jan., 1890	24		
Teddington .. ..	Feb., 1890	41		
Tottenham .. ..	1890	889		
Twickenham .. ..	Jan., 1890	77		
Uxbridge .. ..	Jan., 1890	76		
Wealdstone .. ..	1891	18		
Wembley .. ..	1891	7		
Willesden .. ..	Oct., 1887	956		
Wood Green .. ..	March, 1890	274		
RURAL.				
Hendon .. ..	1891	49	{ Measles, rescinded 1894.	
Staines .. ..	Dec., 1891	128		
South Mimms .. ..	Feb., 1890	6		
Uxbridge .. ..	Jan., 1890	145		

## SMALLPOX.

During the year, three cases of smallpox were notified, one in Tottenham, one in Willesden, and one in Wood Green. There were no deaths recorded from the disease. In the previous year 20 cases were notified, and in the year before 24.

## SCARLATINA.

The term scarlatina is the Latin equivalent for the English term scarlet fever, they are synonyms for the same disease, of whatever type of virulence it may be.

The prevalence of scarlatina in some Districts was greater, in others less than in the previous year.

Dr. Graves Burton (Hanwell), says of scarlet fever:—  
 “I believe the fact of the disease being mild tends to increase its spreading, as parents are more apt to be careless, forgetting that the mild cases are as infectious as others. In many houses the accommodation is so limited that proper isolation is impossible, the parents go out to earn their living, and leave the infected children in charge of others, who allow them to go into the forecourts or back-yards, so that they mix with other children and thus spread the disease.”

## DIPHTHERIA AND MEMBRANOUS CROUP.

In the majority of districts diphtheria and membranous croup were slightly more prevalent than in the previous year, in a few districts these diseases were less prevalent.

As to the causation of diphtheria, Mr. Garry Simpson (Acton Urban District) reports — “The long continued inhalation of diluted sewer air tends to produce a general loss of health especially in young children shown in various ways, and one of these symptoms may be sore throat; or there may be only a condition of depressed vitality, which offers slight resistance to attacks of acute disease. Occasionally a severe form of tonsilitis attacks the occupants of a badly drained house, this form is generally recognised as sewer air throat. These throats are contagious, and directly transmissible from person to person, and without a bacteriological examination is made of the membranes on the tonsils or throat, it is difficult to say that these cases are not true diphtheria. What is more common is to find in these throats not the true bacillus of diphtheria, but a microbe that plays an important part in preparing the throat for diphtheria, by weakening it so that the throat offers less resistance to the action of the specific organism. Dampness and moisture in the air of a house is also a strong predisposing factor in the production of diphtheria outbreaks.”

With reference to the diagnosis of diphtheria, Dr. Kenwood (Finchley Urban District) advises that—“In this disease the spread of the infection (and by consequence the mortality), are largely concerned with the unfortunate circumstance that the early diagnosis of the disease, from clinical symptoms is frequently difficult and impossible; it is, therefore, highly desirable that every Sanitary Authority should contrive to make such arrangements as would provide practitioners with the promptest possible answer to the problem — Is this a case of diphtheria? Bacteriology alone can furnish the answer in many cases,

and every practitioner should have the means of availing himself of this. Diphtheria is now such a scourge, and the cost which the sickness entails upon the community amounts to such a heavy burden, that no reasonable outlay in measures that will check its origin and spread can be regarded as aught but the truest economy."

Similarly, in regard to the difficulties of the diagnosis of this disease, Dr. Graves Burton (Hanwell Urban District) reports—"One of the cases was not notified till it had been taken to the Children's Hospital at Paddington, when it was found to be suffering from paralysis, which is characteristic of this disease but does not develop as a rule till the disease itself, as regards its infectious state, is over, so that considerable damage may have been done by infecting others in the meantime. Fortunately this difficulty of certain diagnosis can be got over by having a bacteriological examination of the membrane or discharge from the throat. The Enfield Urban District Council so far recognised the importance of this, that they issued a circular to the medical practitioners in the district announcing that arrangements had been made to examine bacteriologically any suspected case of diphtheria, and the result is communicated privately to the medical men who send the specimens. The Clinical Research Association and the Institute of Preventive Medicine undertake these examinations and provide a special apparatus for sending the samples to them in. It is practically impossible for the general practitioner to make these examinations himself."

With reference to the dangers during the convalescent stage of diphtheria, Dr. J. D. Windle (Southall-Norwood) says—"Dr. Herman Biggs, bacteriologist to the city of

New York, subjected the secretions of the mouth of 405 cases of true diphtheria to repeated bacteriological examination during convalescence, and he found the microbe persisted in the mouth for a considerable time after all objective signs of the disease had disappeared. In 254 cases (60·5 per cent.) microbes persisted for 3 days after complete separation of the false membrane:—

103	..	25·4	..	7 days.
34	..	8·4	..	12 „
16	..	4	..	15 „
4	..	1	..	21 „
3	..	·75	..	35 „

Such results from a competent authority suggest danger in the mixing of convalescents with healthy people, unless a prolonged quarantine has been enforced, for not only are they capable of spreading the disease, but of conveying it in a far more serious form than that from which they have recovered.

#### TYPHUS FEVER.

This disease rarely appears in the County, but a little girl on board a canal boat, at Brentford, was found to be suffering from typhus. She was promptly removed to the isolation hospital, where she died a few hours afterwards. Every precaution was taken, and the disease did not spread.

#### ENTERIC OR TYPHOID FEVER.

By glancing down the column of estimated population, in Table B, Part III., and dividing the estimated population of each District by 1,000, that is, by omitting the last three figures of the population, the figures that remain form an approximate standard. If the cases of typhoid

fever notified are beyond this number, the prevalence of the disease must be regarded as excessive, if below half this number the prevalence may be regarded as within commendable bounds.

It will be observed that only in the Southall-Norwood Urban, Tottenham Urban, and Uxbridge Rural Districts was the proportion above 1 per 1,000 of population. In some twelve Districts the rate was below 0·5 per 1,000.

*The mode of spread of Typhoid Fever.*—We are slowly but surely tracing the manner in which enteric fever spreads. We know that the virus is eliminated from the human body in the fæces and the urine, and that the micro-organisms, the cause of the disease, will survive and multiply outside the body in favourable media to which they may gain access either directly or indirectly. The disease may thus spread—

- (1) *By contamination of food and drink*, such as water, milk, ices, oysters, mussels, whelks, &c., which are ingested.
- (2) *By contamination of the earth*, through leaky drains, unpaved yards, accumulations of filth, &c., giving rise to soil emanations, and
- (3) *By contamination of the person*, or personal infection from a patient through failure to exercise scrupulous cleanliness and exclusiveness.

Dr. J. D. Windle (Southall - Norwood), reports:—  
“Except in institutions, only one case of this disease occurred in our District; and it appeared probable that the patient in question contracted the disease away from

home. At the London County Asylum, nine cases occurred, of which four proved fatal. The outbreak was investigated by the Medical Officer to the London County Council. The outbreak of five cases in the St. Marylebone Schools did not appear to be due to any sanitary defects existing in that institution."

Mr. Charles Roberts (Uxbridge Rural District), reports:—"Fourteen cases of typhoid fever were, however, notified, but I am happy to state all these arose from importation, and not from any local cause. The first case occurred in February. A young man arrived from London on a visit to friends; he was then ill, and was seen by a doctor next day, who pronounced him to be suffering from typhoid fever. The water used was supplied by the Company's mains, and was quite pure; disinfectants were employed, and the excreta ordered to be buried in the garden; but, in spite of this, five other cases occurred in the cottage, and there was one death. In August, a young man came to his home from Ealing, and shortly afterwards developed typhoid fever, and in September his brother and sister contracted the disease. In September, a young woman came to her home from Ealing, and shortly afterwards was attacked by the disease, and in October a brother and two sisters also developed the disease. The remaining case notified proved eventually to be not true typhoid, although exhibiting the usual symptoms at first."

With regard to the causation and prevention of typhoid, Dr. Kenwood (Finchley), writes as follows:—"The problems connected with the life history of the bacillus of typhoid fever outside the human body are now being scientifically attacked, and recent work by Lösner, Martin, Pfeiffer,

Kolle, Robinson, and others, tend to establish the view, which is supported by so much circumstantial evidence, that polluted soil is a great medium in which the germ thrives, and the fact that the death rate from typhoid fever, in this and some other countries, has been markedly reduced during recent years, may safely be attributed in the main, to two circumstances, *i.e.*, firstly, that the pollution of the soil has greatly been diminished, and secondly, that the increased precautions taken of late years to guard our drinking water and milk from pollution, have had the effect of materially reducing the extent by spread, of a filth disease, which is so frequently water or milk borne.

To reduce the typhoid incidence every effort must be made by the proper sanitary control of encampments of itinerants, &c., and by the abolition of leaky and defective drains, cesspools, midden pits, &c., to guard the soil, more especially that around houses, and in the neighbourhoods of collecting areas for drinking water, from an infection which may, doubtless, grow and remain active in such soil for long periods, under certain conditions, and the possibility of water acting as a carrier must be removed in the only certain way, *i.e.*, by going to a pure source for a pure supply and sparing no pains and expense to guarantee the continued purity of the water from the site of its collection until it reaches the consumer."

As in the case of diphtheria, so also in the case of "fever," a bacteriological test can be applied to ascertain whether any given case is one of typhoid fever or not, and in all cases vaguely notified as "continued fever," such a means, known as the Vidal test, may be adopted with advantage for diagnostic purposes.

## CONTINUED FEVER.

Cases of continued fever were notified in Chiswick (4), Edmonton (1), Tottenham (2), and Willesden (1). Chiswick still maintains its pre-eminence in the number of cases of this disease.

## PUERPERAL FEVER.

The total number of cases notified during the year was 46, as compared with 67 in the previous year.

## CHOLERA.

Five cases of cholera were notified, as compared with one case in the previous year. There is no reason to suppose that they were anything but English cholera.

## ERYSIPELAS.

The number of cases of erysipelas notifiable was about the same as in the previous year.

## MEASLES.

Judging by the mortality returns, measles appears to have been much less prevalent, and to have caused much fewer deaths, than in the previous year, except in one or two Districts.

The question of the advantage of adding measles to the list of diseases compulsorily notifiable is very debatable. But there is not the least doubt of the beneficial effect of distributing leaflets as to measles to schools and houses where measles is known to exist.

Mr. Garry Simpson (Acton) distributes the following leaflet:—

“ MEASLES.

“ *Instructions to the Public as regards Measles.*

“ Leaflet issued by the Sanitary Authority of Acton.

“ *Very Important to Parents.*

“ In order that you may take steps to prevent measles becoming prevalent here during the coming spring, it is important that you should know the following facts:—

“ Measles is a dangerous disease, and must not be neglected; it is also most contagious from the commencement of the attack, and remains so for four weeks.

“ Measles begins with symptoms of severe cold, watering of the eyes, running at the nose, pain in the forehead, and irritable cough. At this stage, before the rash appears, the disease is extremely catching.

“ Look upon all colds with suspicion just now, and keep any child with the above symptoms in a warm room by himself.

“ *Send at once for Medical Assistance.*

“ It is dangerous for parents to trust to household remedies. On the fourth day a rash appears, first on the forehead and face, in the form of minute dots of a dull red or raspberry colour; many of the spots joined together.

“ The great danger in measles is the tendency of the cold to spread to the lungs.

“ *So all exposure to Cold must be avoided.*

“ The infection of measles is easily conveyed by the clothing of persons not themselves attacked by the disease.

“Should you have the disease in your home, forbid your house to all, and let nobody from your house go into anyone else’s.

“Clothing and bedclothes should be disinfected by being well boiled in water.

“Any articles which will not bear boiling should be thoroughly washed with carbolic soap, and then freely exposed to the out-door air.”

He further adds that—“This complaint is not required to be notified to the Sanitary Authority under the provisions of the Infectious Diseases Act, 1889. It becomes a question whether any great advantage would accrue from its addition to the list, unless hospitals were provided for the reception of those cases which could not be properly isolated at home. It is an undoubted fact that the disease is frequently spread through the agency of schools. The duration of an epidemic has frequently been shortened by the closure of schools, both public and private. The School Board do not allow children living in infected houses to attend their schools, a fact probably unknown to many parents.”

With reference to prevention, Dr. Kenwood (Finchley) makes some remarks—“School closure does not effect a great deal in checking the spread of a disease like measles, when, as was the case in Finchley, a large number of susceptible infants are in the population by reason of the fact that a great and exceptional immunity from the disease had been enjoyed for several years. I attach more importance to the distribution of handbills, of advice and information, with a view of reducing the preventable mortality of the disease. Many hundreds of such handbills

were distributed during the year, and it is encouraging to note that, although the epidemic was very extensive and general, the mortality has been small. Thanks to the co-operation of the head teachers, I was able to learn from day to day of the number of absences from measles, and of their addresses, and the Sanitary Committee sanctioned the measure of distributing the handbills of advice and caution along every street in which I learnt a case existed. Although it is not easy, owing to the peculiar nature of the disease, for parents to always successfully ward off attack from their children, it is so easy, with a little knowledge, to ensure that the patient makes a good recovery, that it is believed that the handbills were of value in preventing the Parish from swelling the thousands of preventable deaths from measles which are registered in London alone each year."

#### WHOOPING COUGH.

Judging also by the mortality, this disease appears to have been much less prevalent during the year than usual.

#### DIARRHŒA.

Also judging by the number of deaths, diarrhœa, on the other hand, was much more prevalent than in the previous year. It will be noticed on reference to Table A, Part III, that very few of the deaths occur over five years of age, and roughly three-fourths of diarrhœal mortality occurs in infants under one year, and that mainly during the hot weather.

Mr. F. W. Andrew (Hendon Urban District) reports as to the causation of diarrhœa:—"Every one of the 33 deaths took place (with one exception) under one year of age, the average being six and three-quarter months, thus showing how peculiarly fatal this complaint is in children of tender age.

"I visited all the houses affected, and obtained numerous particulars with a view to giving some clue to the cause of the epidemic.

"In nearly every case I found the mother belonging to the working class. In some cases the mothers put the children under the care of some one else while they went out to work. Others I found living in unwholesome surroundings, while again others were apparently very industrious and attentive to their children, the homes clean and bright and all that could be desired. I also made very careful investigation as to the kind of food the children were brought up on; and while on this point I should like to say that although the parents were willing to give me any information, I feel sure such information was not in many cases accurate, for in many instances the mothers, being out at work, do not know what odds and ends are given when under the charge, of say, a very young child.

"At one house I gathered that the baby, although only nine months old, had the following—"Breast at times, Nestle's milk and nursery biscuits, gravy and potato, bread and butter, sugar, a little haddock when they had any, sweets, sugar sticks, &c.," and this, combined with a dirty house, it was not surprising to hear the child had died from diarrhœa. I went also into the question as to

whether it were possible, that any particular food were at fault, as for instance, a special brand of condensed milk used by all in that part of the neighbourhood, but my investigations gave me no clue as to this being the cause, the feeding being very varied. The water supply was the same as supplied elsewhere, and had nothing to do with it.

“It is well known that epidemic diarrhoea is caused at times by atmospheric conditions arising from the surface of the soil, especially in hot weather, due to micro-organisms. I am of opinion that such atmospheric conditions prevailed during the epidemic, and that the extremely hot weather, combined with bad feeding, was instrumental in causing the severe form of diarrhoea which occurred in the district.”

With reference to causation and prevention, Dr. Kenwood (Finchley) also reports :—“There is no doubt that summer diarrhoea is a special form of diarrhoea, and must be thought of as something quite apart from the diarrhoea which figures as a cause of death all the year round. The investigations of Ballard and others may be taken as having established the fact, and to have made it practically certain that the epidemic form of diarrhoea is a true infective process in which specific micro-organisms are concerned. The death rate from diarrhoea remains remarkably constant through the winter and spring, when the ordinary agency of injudicious dieting is almost alone concerned in its production, but, with little preliminary warning, as the hot weather sets in, an extensive outburst of the summer type of diarrhoea occurs, from which very few of those at the extremes of life or who are enfeebled, escape, although the death-rate is mainly swelled by the

children of the poorer people who do not obtain prompt and skilled attention until it is too late. This summer diarrhoea is the most fatal of all zymotic diseases, and more especially during the year in review, it exercised a considerable influence on the death-rate of the kingdom. There are good reasons for believing that the essential cause of the complaint resides in the soil, and that, under favourable meteorological conditions (more especially of temperature) the infection leaves the earth and gains access to air, water, and food. It is very important, therefore, to take every measure which will ensure the utmost possible freedom of these necessities from contamination, especially in the summer months. Infants who are fed artificially for the first nine months of life, suffer much more from the complaint than those fed naturally from the mother's breast, and when such artificial feeding is necessary, much mortality would be prevented if parents followed two golden rules:—(1) Give nothing but well-boiled fresh milk, or milk and water, for the first nine months, and (2) keep all milk vessels and feeding bottles rigorously clean."

As to the possibility of action by a Sanitary Authority to prevent diarrhoea, Dr. C. D. Green (Edmonton Urban District) says:—"It is a matter well meriting careful consideration, whether the Local Authority can do anything to reduce the prevalence and the mortality of this disease.

"The evidence which has been gathered by those who have made investigations into the causation of this disease, seem to show that it is a disease of bacterial origin, and that the diffusion of the specific organism

thereof is connected with certain conditions of the soil and the ground water, and that the pollution of the surface soil is certainly favourable to its dissemination.

“The conditions under which a considerable number of infants, especially in such areas as I have found to suffer from outbreaks of this disease, are very defective as regards food, clothing, cleanliness, and general management.

“I have often seen houses in which infants in the day time are allowed to roll about on a dirty floor, or are stowed away in a filthy and dilapidated perambulator in a dark corner of an ill-kept kitchen swarming with flies, or dragged about the streets by a child scarcely able to carry them, and who in the night time are half stifled in bed by their parents.

“Now when once a young infant has got an attack of this disease, it is, under any conditions in considerable danger, and its cure demands an amount of attention and skill in nursing, which it is not, in very many instances, in the power of its mother to give or to command.

“It would, I think, be scarcely possible to organise any system of relief when once an outbreak had started, as the cases occur with such rapidity that there would be no time.

“The measures which I think might prove of service in the treatment of an outbreak of this disease are:—The establishment of a station where certain dietetic preparations found useful in the treatment of the disease could be supplied; the provision of a small staff of nurses who

would visit and assist in the management of cases at their homes; and the provision of a temporary hospital, where some of the more grave cases could be received, an ordinary house temporarily rented would answer perfectly well.

“I am not aware that much has hitherto been done by Sanitary and Municipal Authorities to aid the treatment of this disease, but as a factor in the infantile mortality, at all events in this district, it plays a considerable part. As an experiment at first over a limited area, I think some attempt to combat the disease on the lines I have indicated, might usefully be tried, and (should the Council think further of the matter) there is ample time for the Sanitary Committee to discuss the details; the means of carrying out any measures that may be adopted, should be ready not later than the second week in July.”

#### TUBERCULAR PHTHISIS.

This disease claims such prominent attention at the present moment, that the following extracts will be found to be of interest.

Dr. Clothier (Hornsey) reports:—“Tuberculosis is also one of the preventable diseases which not uncommonly affects the human race; it also depends for its existence upon bacilli, which generally enter the body by way of the mouth, in the shape of a very unwelcome and harmful addition to the food. The chief vehicle is food milk, which has become infected either from the cows suffering from tubercular disease affecting the internal parts, such as the lungs, glands, &c., or more frequently, from a superficial

tubercular ulceration of the teats. It has also been decided that the meat from animals suffering severely from tuberculosis can convey the disease. It may be stated that if such meat is well cooked, and the tubercle carrying milk either scalded or boiled, the bacilli are rendered harmless, but even supposing that to be so, are people to be subjected to risks attendant on these processes, should not the aim rather be to make it a penal offence for any one to sell such meat and milk? The only way I know of to prevent such infected meat being put on the market is for properly instructed inspectors to view the carcasses, and condemn any meat they may consider unfit for consumption, and this can hardly be done until public abattoirs come into more frequent use. As regards milk, the public can, to a certain extent, be protected by periodical examination of the cows, and there is a more sure test in what is called the tuberculin treatment, with which experts can tell whether animals are affected with tubercle or not. I believe that before long all large dairies will in self-defence be obliged to be able to certify to their customers that the cows which give their milk supply have successfully undergone the tuberculin test, something of this sort will have to be done, the public must be protected from the dangers incident to the consumption of meat and milk tainted with tubercle; a large percentage of cattle are said to be suffering from this disease, more especially cows which are kept in stalls for a large part of the year, and fed on food calculated to stimulate the production of the largest quantity of milk (quantity, not quality being the desideratum of the producer), in fact, cows so kept, being more or less artificially treated, are in consequence not in such a healthy condition as they should be, and it can surprise no one that under such unfavourable

hygienic conditions tubercle is prevalent; the fact that nearly one-tenth of the total deaths (as was the case this year in the Hornsey District) are attributed to diseases owing their origin to the presence of the tubercle bacillus, must be my excuse for entering somewhat in detail into the matter. In connection with the danger to the community, arising from the germs of sputa, expectorated by tuberculous patients in various public places, such as railway carriages, omnibuses, tramway cars and public thoroughfares (the said sputa being liable to become dried and converted into dust), I notice that in America where this disgusting habit is said to be very prevalent, that the Women's Health Protective Association has been joined by the Health Board of New York, in endeavouring to put a stop to the practice by placing conspicuously posted notices inviting passengers to refrain from spitting, for the two-fold reason of decency and health, and that this example has been followed in Italy. That this habit of expectorating is both disgusting and likely to cause danger to others cannot be denied, but I think that it is done thoughtlessly, and the danger of it only requires to be pointed out for public opinion to see that the nuisance is abated. I understand that in a few instances at least, these notices are posted up in some of the tramcars in London, and it is much to be desired that the plan should become general."

Mr. G. H. Butler (Wealdstone), says in reference to milk supply and tuberculosis:—"The recent adoption by the Council of bye-laws for the regulation of slaughter-houses, cow-sheds, and milk-shops, &c., will enable us to deal with this important section of sanitary work in a more satisfactory manner than previously. Nothing has been more clearly established than that milk is frequently an

important factor in the transmission of disease, and this emphasises the extreme importance of providing a sanitary environment for the cow. There is great danger of the conveyance of tuberculosis, and to prevent this the udders of cows should be carefully watched, as this is the chief source of danger, and any signs of disease in these organs noted and reported immediately."

Mr. Henry Bott (Brentford) says in the same strain:—  
 "There is no doubt that phthisis is an infectious, and, therefore, preventable disease. The infection is usually spread through the expectoration. It is, therefore, of the utmost importance that the expectoration should be collected in a proper vessel containing a small quantity of disinfectant, which should be emptied frequently, or, if a cloth or handkerchief, it should be burnt. Persons suffering from this disease should always sleep alone. The room occupied should be well ventilated, and, when the person is removed, should be disinfected by the Sanitary Inspector."

Similarly in reference to milk supply, Mr. Dwight Morris (Sunbury) says:—"While on the subject of tuberculosis, I would point out the absolute necessity of skilled veterinary inspection of cows from time to time, in order to detect as early as possible this disease, if present, as a safeguard against its extension by the means of milk supplies. This would be easy at those dairies and cowsheds immediately under the control of the Council. There is another source of milk distribution which is difficult to deal with, and that is the itinerant vendor of what is called "separated milk," which is bought by the poor on account of its cheapness; but, coming from sources unknown, might contain anything

of an injurious character, as milk *par excellence* is a microbe carrier."

Dr. Fletcher Little (Harrow-on-the-Hill) pleads strongly for the veterinary inspection of dairy cattle:—"It is sad to record the deaths of seven people from phthisis. This is now regarded as infectious, and therefore a preventable disease. The infection is usually spread through the inhalation of the dried expectoration, or by drinking the milk of tuberculous cows. Damp, ill-ventilated houses lower the vitality, and render the dwellers in them less able to resist the contagion. All such houses should be reported, and all the rooms used by phthisical patients should be disinfected. A patient suffering from this disease should sleep alone. He should not expectorate on the floors, and all his sputa should be burned. Several cases of tuberculosis have occurred in children. This should induce all parents to make a careful inquiry concerning the sanitary condition of the sources of milk which they purchase for their children, and the Council should appoint a Veterinary Surgeon to test all the dairy cattle for tuberculosis."

While Uxbridge Urban District (Dr. A. Charpentier) actually carries into effect what is recommended, as the following Report of the Veterinary Surgeon upon the health of animals within the District, shows:—

"Veterinary Establishment,

"Uxbridge,

"February 17th, 1898.

"Gentlemen,

"During the past year the health of animals generally within the District of the Uxbridge Urban

Council has been good, and there has been little infectious or contagious disease.

“So far as this locality goes it may be assumed there is a much better state of things existing at present than in former years, for not only are the sanitary arrangements in common with the housing of dairy stock much better, but the stock kept is decidedly of a better class.

“At one time a cowkeeper would purchase anything, whereas now he begins to see that it is to his interest, not only to buy properly, but to keep what he has in health as far as possible.

“I find that during the past year we have had six outbreaks of swine fever (besides nine suspected outbreaks). These were taken to by the Board of Agriculture, slaughtered, and compensation given to the several owners.

“There have occurred in your District seven cases of tuberculosis, five of which were detected in a comparatively early stage through the adoption of the tuberculin test, and in regard to these it would, in my judgment, have been next to impossible to have formed a safe diagnosis without this test. Three of these were verified by a *post mortem*, the other two being sold to a dealer. The other two cows were suffering from disease in a very advanced stage, and were sold to a knackerman.

“With your permission I would like to suggest, knowing it can only possibly be brought about through your instrumentality, that there should be ordered by the District Council a periodical inspection of all the cows within the District by a qualified veterinary surgeon. That any question of importance should be reported to yourself.

“I feel confident that if this examination did take place, it would be of great advantage to all concerned.

“There have been no outbreaks of glanders, pleuropneumonia, foot and mouth disease, sheep scab, or rabies in your District.

“I remain,

“Yours faithfully,

“W. ASHTON HANCOCK.”

## SECTION 2.—ISOLATION AND HOSPITALS.

In the Report for 1895, a full account of the Isolation Hospitals and Ambulances of the County, and of the provision made in each District, was given. Accompanying it were tables, and these tables, brought up to date, are reproduced and here inserted.

The Smallpox and Vaccination Hospital has been removed from Highgate to Barnet, and the word “Barnet” in the column headed “Smallpox Accommodation” in the Table below refers to that Hospital.

It remains only to quote the opinions expressed as to the benefits of the provision and the evils of the want of provision for isolation, and to record the progress made.

DISTRICTS.	Since when ?	Where situated.	No. of Wards.	No. of Beds.	Diseases admitted.	Smallpox accommodation.
URBAN.						
Acton ..	None ..	..	..	..	..	20 beds, Barnet.
Brentford ..	Feb., 1892..	Clay Ponds Lane ..	4	10	Scarlet Fever ..	To Barnet.
Chiswick ..	Site secured	..	..	..	..	7 beds, Barnet.
Ealing ..	1884	Near southern boundary	5	16	All infectious diseases	None specially.
Edmonton ..	None ..	Cases sent to Enfield ..	..	..	..	To Barnet.
Enfield ..	Nov., 1891..	Temporary Hospital, Lincoln Road, Ponder's End	4 1	36 1	Scarlatina. Permanent Hospital to be erected at World's End.	5 beds, Barnet (Enteric Fever admitted to Cottage Hospital).
Finchley ..	April, 1889	Summer's Lane ..	3	12	Scarlatina ..	Site for tent ready.
Friern Barnet ..	None ..	Cases sent to Enfield ..	..	..	..	To Barnet.
Greenford ..	None ..	..	..	..	..	None.
Hampton ..	(?)	Tolworth, Surbiton, Surrey	(?)	(?)	(?)	Smallpox admitted.
Hampton Wick ..	None ..	..	..	..	..	None.
Hanwell ..	Plans ready	Site at Sewage Farm ..	2	8 + 4	..	None.
Harrow ..	Dec., 1894..	Newton Farm, Roxeth	2	11	Such as M.O.H. directs	To Barnet.
Hendon ..	1890	Renter's Lane ..	{ 2 }	{ 12 4 }	Scarlatina, and a new ward to be added	To Barnet.
Heston & Isleworth	(?)	Dockwell Lane, Heston, near Cranford	(?)	(?)	A new Hospital being erected at Mogden	To Barnet at present, to Dockwell Lane later.
Hornsey ..	..	Coppett's Road, Muswell Hill	12	(?)	Scarlatina, Diphtheria, and Typhoid Fever	To Barnet.

## ISOLATION HOSPITALS—continued.

52

DISTRICTS.	Since when?	Where situated.	No. of Wards.	No. of Beds.	Diseases admitted.	Smallpox accommodation.
Southall-Norwood	New Hosp. proposed at North Hyde	Joint Hospital, Hillingdon, Uxbridge Road	..	..	Scarlatina and Diphtheria	Joint Hospital.
Southgate	None	..	..	..	..	To Barnet (5 beds).
South Hornsey	None	Site obtained, works proceeding.	..	..	..	None.
Staines	None.	..	..	..	..	None.
Sunbury	None	..	..	..	..	To Barnet.
Teddington	None	..	..	100	Scarlet Fever	..
Tottenham	March, 1894	N.E. Hospital, M.A.B., St. Anne's Road	..	..	Scarlet Fever.	..
Twickenham	..	Cottage Hospital, near Sewage Works	..	..	Scarlatina and Diphtheria.	Joint Hospital.
Uxbridge	..	Joint Hospital, Hillingdon, Uxbridge R.D.	..	..	Scarlet Fever, Diphtheria, and Typhoid Fever	To Barnet.
Wealdstone	None	Send to Willesden	8	42 & 16 cots, 12 & 2 cots	..	Iron building of 2 wards and 14 beds.
Wembley	None	Dog Lane, Stonebridge, near Neasden	..	..	..	To Barnet.
Willesden (no charge for residents)	Aug., 1892	Site obtained	..	..	..	..
Wood Green	None	Site obtained	..	..	..	..
RURAL.						
Hendon	None	Site obtained.	..	..	..	Iron shed at Workhouse, Stanwell.
Staines	None	..	..	..	..	A separate block of the hospital.
South Mimms	None.	Joint Hospital, Kingstons Lane, Hillingdon	6	20	Scarlatina and Diphtheria	..
Uxbridge	1882					

Dr. J. J. Ridge (Enfield) reports as to the provision of hospital accommodation for infectious cases that:—"A contract has been sealed for the erection of the new isolation hospital at World's End for the sum of £23,014, and the work has been commenced. This includes an administrative block (three pavilions, containing fourteen beds each, namely, twelve in two general wards and two in special wards), an observation block containing six beds, a discharge block, a laundry, mortuary, and lodge. It is intended to remove the present iron buildings to the same site, and the whole, when completed, will accommodate 48 cases of scarlatina, 14 of diphtheria, and 14 of enteric fever, making 76 beds, and with the six in the observation block, a total of 82."

Dr. D. S. Skinner (Willesden), in pleading for extension of the isolation hospital, says:—"It has been argued that isolation has not effected the diminution in the incidence of scarlet fever that was expected of it; a reference to the figures for the five years from 1893 will, I think, somewhat refute that suggestion. In that year the arrangements for isolation were not in any way complete, there was one iron building capable of holding 12 beds. The following year the permanent buildings were available and isolation was able to be carried out, although the accommodation for scarlet fever only consisted strictly of 32 beds. With our rapidly increasing population the accommodation each year has become more strained, and consequently we have to a certain extent been reverting to the condition that existed in 1893. In former reports I have drawn attention to the thousands of children in the district who are susceptible to the disease. In making provision for isolation and for comparison with other

districts it is important and necessary to know the birth-rate of the district and the social status of the majority of the inhabitants. A population of 100,000, half of whom are in a position to effectually isolate and take charge of their own cases, would not require the isolation accommodation that a poor and densely populated area would. A wealthy parish in the west end of London would possibly not require any public means of isolation at all, but its poor neighbours would require it to its fullest extent.

“In 1896 the isolation was strained to its utmost limit; in 1897 it broke down, not because there was a greater incidence or severer epidemic of the disease, but because there was a larger population.”

The value of accommodation for isolation is emphasised by Dr. Kenwood (Finchley):—“I can testify to the fact that the isolation of these 32 cases has effected a very great amount of good in return for the small administrative expenses incurred, both in the direction of removing foci for infection to others, and thus reducing the number of sufferers from scarlet fever in the district, and also enabling many of the poorer section of the community to renew their wage earning many weeks earlier than if they were compelled to nurse the patient at home.”

At Wood Green (Mr. C. H. Conolly), a site has been acquired:—“The negotiations with Southgate as to the provision of joint hospital accommodation at the Tile Kiln Lane having fallen through, the Council have, after protracted inquiries and with considerable difficulty, obtained an alternative site suitable for the needs of the District alone. Although at the date of this Report the negotia-

tions are not actually completed, the acquisition of the land may be regarded as at length successfully accomplished. Many cases have occurred during the year to show the practical impossibility of securing adequate isolation in the houses of many of the poor, and the urgency of the need for hospital accommodation."

Mr. Garry Simpson (Acton) regrets the absence of accommodation for infectious cases:—"Although I have persistently and constantly urged upon you the necessity of providing an isolation hospital, or making proper and efficient provision for cases of infectious disease, I regret that I have been so far unsuccessful."

Dr. C. D. Green (Edmonton) describes in detail the difficulties and disadvantages of want of hospital accommodation for infectious diseases:—"No further provision has as yet been made, and the remarks I have made in previous Reports still apply.

"The need of adequate provision is felt every year, and the cost and difficulty of providing it will, I fear, increase with delay. During the year to which this Report relates, the want of such provision was most keenly felt in dealing with the outbreak of diphtheria, there being absolutely no accommodation at the disposal of the Council.

"Twenty-six cases of scarlet fever were removed to the Enfield Isolation Hospital.

"Five cases of enteric fever were received into the Tottenham Hospital, admission having been arranged

through private sources. This matter is one still demanding the careful consideration of the Council. The question has been before the Local Authority at intervals during the last seven years, and all that has actually been accomplished (except as regards the agreement with the Smallpox and Vaccination Hospital for the reception of a limited number of smallpox cases, which has hitherto been found sufficient) is that an arrangement has been effected whereby scarlet fever cases can be sent to Enfield Hospital when the authorities there have no other use for the beds. This arrangement has proved of great benefit, but it does not meet the needs of the District, several important cases having been refused for lack of room, and in no instance is your Medical Officer able to order the immediate removal of a case, but the consent of the Enfield authorities has in each separate instance to be first obtained, an arrangement which frequently causes considerable delay, even if the case is ultimately removed. As regards diphtheria and enteric fever, there is no accommodation whatever at the disposal of the Council's officers."

Mr. C. E. Goddard (Wembley) reports as to the necessity of isolation hospital accommodation being provided to meet coming change of conditions :—" I was asked, in February last, to report to you relative to the isolation hospital, and I told you that I had modified my opinion, and that I could not recommend you to embrace the proposed scheme for a fever hospital at Kenton, for several reasons. Nevertheless, gentlemen, the neighbourhood is increasing, and the immunity from infectious disease cannot be expected to last indefinitely, so that though the consideration of the matter may not be urgently and immediately pressing,

I would remind you that an isolation hospital will be needed, and having regard to the high fees charged at Willesden, it may, in the near future, be a more economical course to arrange to accommodate our fever cases nearer home. I am bound to say, however, that the existing arrangement has, up to the present, proved satisfactory and economical, mainly because of the limited number of cases."

# AMBULANCES.

DISTRICTS.	Ambulance?	Since When?	Where kept?	Accommodation?	Type and Remarks.
URBAN.					
Acton ..	Yes	..	Shed, Acton Lane, Uxbridge Road.	2 patients ..	4 - wheeled cab, without upholstery.
Brentford ..	Yes	Aug. 1893	Town Meadow, High Street	2 patients, 1 attendant	Usual type, horse driven.
Chiswick ..	Yes	1894	Fire Station, High Road	Stretcher and seat	4-wheeled covered van, driven by horses.
Ealing ..	Yes	1884	Isolation Hospital	2 patients, 1 nurse	New horsed van, M.A.B. type.
Edmonton ..	Yes	1895	Sewage Farm ..	2 recumbent, 1 sitting	Horsed vehicle, opening behind.
Enfield ..	Yes	1885	Court House ..	2 cases ..	Horse brougham.
Finchley ..	Yes	1889	Hospital Grounds ..	1 patient ..	Barnet Workhouse Ambulance, 6 miles away.
Friern Barnet ..	No	..	..	..	Infectious Hospital is at Tolworth, Surbiton.
Greenford ..	No.	..	..	..	..
Hampton ..	(?)	..	..	..	..
Hampton Wick ..	No.	..	..	..	..
Hanwell ..	No.	..	..	..	..
Harrow ..	Yes	..	Council's Dépôt ..	2 recumbent ..	1-horse brougham.
Hendon ..	Yes	1879	Hospital ..	..	1-horse cab.
Heston and Isleworth ..	(?)	..	..	..	Infectious Hospital is at Dockwell Lane, near Cranford.

Hornsey ..	Yes 2 ..		{ Hospital, Coppett's Lane	(?)	For hospita
Southall-Norwood ..	..		{ Dépôt, Hornsey ..	(?)	For smallpox only.
Southgate ..	Yes. 1896		(?)	(?)	Joint Hospital is at Hillingdon, Uxbridge Rural District.
South Hornsey ..	No. ..				
Staines... ..	No. ..				
Sunbury ..	No. ..				
Teddington ..	No. ..				
Tottenham ..	Yes 1889		Coombes House, High Road	1 patient, 1 attendant	1-horse, M.A.B. type, reserved for smallpox. Two new ones constructing.
Twickenham ..	(?) ..		..	..	Cottage Isolation Hospital is at Sewage Works.
Uxbridge ..	..		Iver, Bucks (?)	..	Joint Hospital is at Hillingdon, Uxbridge Rural District.
Wealdstone ..	No. ..				
Wembley ..	No. ..				
Willesden ..	Yes 2 1895		Hospital Grounds	1 patient, 1 nurse	New horsed brougham. Old reserved for smallpox.
Wood Green ..	Yes. 1896		(?)	(?)	
RURAL.					
Hendon ..	No. ..				
Staines ..	No. ..				
South Mimms ..	No. ..				
Uxbridge ..	Yes 1895		Inspector's Residence	1 patient, 1 nurse	M.A.B. type.

## SECTION 3.—DISINFECTION AND METHODS.

As in the case of isolation hospitals and ambulances, so also, in the Report for 1895, a full account of disinfecting chambers and disinfection, and of the provision made in each District, was given. Accompanying it, was also a table, which has been brought up to date, reproduced, and here inserted.

It will be seen that some progress is also being made in this direction.

## DISINFECTING CHAMBERS.

Districts.	Since when ?	Where situated ?	Type.	Transport Charges. Remarks.
URBAN.				
Acton .. ..	Oct., 1894	Sewage Works ..	High pressure steam	Two hand - trucks. No charge.
Brentford ..	Feb., 1892	Hospital Grounds ..	High pressure steam	One hand - cart. Charge, 7s. 6d.
Chiswick ..	None.	Northern Works,	Hot air oven ..	Iron horse-cart at Northern
Ealing ..	1882	Perivale	Gas oven.	Wrks. Charge a guinea.
	1884	Hospital. Southern Boundary		
Edmonton ..	1882	Sewage Farm ..	Hot air oven..	Two horse - conveyances. Charge rarely made.
Enfield ..	1887	Sewage Farm, Ponder's End	High pressure steam	Two horse-vans. No charge made.
Finchley ..	None.			
Friern Barnet ..	None.			
Greenford ..	None	.. ..	.. ..	Oven at Ealing Northern Works used. No charge made to occupiers.
Hampton..	?			
Hampton Wick ..	None.	Proposed at Hospital	.. ..	Ealing apparatus used at a fixed charge.
Hanwell ..	None	Proposed at Hospital	Steam ..	Harrow School has apparatus at School Laundry, Roxeth.
Harrow ..	None.			

Disinfecting Chambers—*continued*.

Districts.	Since when ?	Where situated ?	Type.	Transport Charges. Remarks.
URBAN—continued.				
Hendon .. ..	None.	.. .. Hospital, Coppett's Lane Depôt, Hornsey ..	Steam.	Laundry attached.  Laundry attached, and vans.
Heston and Isleworth ..	1896		High pressure steam	
Hornsey .. ..	Two		High pressure steam	
Southall-Norwood ..	None.	Outfall Works ..	High pressure steam.	Two vans. No charge.
Southgate .. ..	None.			
South Hornsey ..	None.			
Staines .. ..	None.			
Sunbury .. ..	None.			
Teddington ..	None.			
Tottenham ..	1896			
Twickenham ..	None.			
Uxbridge .. ..	None.			
Wealdstone ..	None.			
Wembley .. ..	None.	Hospital Grounds .. Moat House .. ..	High pressure steam Low pressure steam..	Two horse-vans. No charge. Two hand-carts. No charge.
Willesden ..	1895			
Wood Green ..	1893			
RURAL.				
Hendon .. ..	None.	Hospital Grounds ..	Hot air. Brick oven.	For use of hospital only.
Staines .. ..	None.			
South Mimms ..	None.			
Uxbridge .. ..	1886			

The provision for disinfection made at Tottenham (Dr. W. T. Watson) is being extended and improved, which is evidence of appreciation.

“As mentioned in my Report for 1896, a Washington Lyons steam disinfector has been erected at the outfall works, and two vans, which I referred to as being built for the Council, were delivered some months ago, and have been at work very frequently since. All infected articles of clothing (except where the Medical Attendant certifies to the contrary) are removed, disinfected by superheated steam under pressure, thoroughly dried, and returned to the owners free of charge.

“Plans are now being prepared for a laundry, which is to be worked by steam supplied from the same boiler as now works the disinfector. When this is completed all articles of clothing, &c., will be thoroughly washed and otherwise treated with disinfectants after, and, in addition to being passed through the disinfector.”

Dr. J. D. Windle (Southall-Norwood) strongly urges the provision of apparatus for disinfecting purposes, and says:—

“One of the most important measures in preventing the spread and recurrence of infectious disease is efficient disinfection. This can only be carried out by a steam apparatus. I have previously (Report for 1896) shown that our system of disinfection after infectious illness is far from satisfactory. It is the weak spot in our sanitary armament. It is well known that unless this process is efficiently carried out the germs of disease will lie dormant for long periods in bedding, clothing, toys, &c., and break into activity again under favourable circumstances. During

the year we have had many cases of diphtheria occurring in previously infected houses, and it appears to me very probable that some of these have been due to defective disinfection. I would respectfully urge the Council to purchase a steam disinfecting apparatus at once."

#### SECTION 4.—VACCINATION.

The subject of vaccination is at the present moment engaging the attention of the legislature, and it is to be hoped that a satisfactory Act of Parliament will be the outcome.

The Sixth and final Report of the Royal Commission on Vaccination expresses the following definite opinion:—

"503.—We can see nothing, then, to warrant the conclusion that in this country vaccination might be safely abandoned and replaced by a system of isolation. If such a change were made in our method of dealing with small-pox, and that which had been substituted proved ineffectual to prevent the spread of the disease (it is not suggested that it could diminish its severity in those attacked), it is impossible to contemplate the consequences without dismay.

"To avoid misunderstanding, it may be well to repeat that we are very far from underrating the value of a system of isolation. We have already dwelt upon its importance. But what it can accomplish as an auxiliary to vaccination is one thing, whether it can be relied on in its stead is quite another thing."

*With regard to improvements in the law as to vaccination there are certain that are, above all others, very important :—*

1. To fix a standard of primary vaccination of at least four separate marks, and an area of at least half a square inch of vaccinated surface of cicatrix.
2. To require that all certificates of primary vaccination should state the number of successful marks and the area covered by the vaccination surface.
3. To provide that no certificate of primary vaccination should be accepted as a successful certificate unless conforming to this standard, and to provide for dealing with unsuccessful certificates and cases.
4. To give the vaccinator the option of having calf lymph.
5. To provide for the gratuitous supply of calf lymph to every vaccinator.
6. To provide for re-vaccination between the ages of 10 and 12 years, and during epidemics.
7. To transfer the duty of supervising vaccination from the Guardians to the Sanitary Authorities.

With reference to the last proposition, serious local epidemics of smallpox have occurred in various parts of the country, and difficulties have arisen in these outbreaks, due to the division of authority between the Sanitary Authorities and the Poor Law Guardians in the prevention of the spread of smallpox.

The various means for coping with the disease, and the prevention of its spread, should be in the hands of one Authority, and this for many reasons.

The question whether vaccination should be compulsory or not does not affect the control of vaccination, for, whether compulsory or not, all sensible people will still continue to be vaccinated, and public vaccination will continue to require to be organised.

Vaccination is a measure for the prevention of disease and not for the cure of disease. Sanitary Authorities deal with the prevention of disease; Guardians' Boards, when they deal with disease, deal with the cure of disease. Sanitary Authorities deal with protection of the whole community — rich and poor alike—from disease, and especially communicable disease. Boards of Guardians deal with the treatment only of the absolutely indigent. The connection of pauperism with vaccination has been its greatest bane, from the fear of the loss of civil rights and of self-respecting independence.

The transfer of vaccination from Boards of Guardians to Sanitary Authorities would place the whole machinery of the prevention of smallpox in one organisation, the relative parts of which could be mutually adapted to suppress smoothly and expeditiously any appearance of epidemic.

If vaccination were in the hands of Sanitary Authorities it would obviate much misunderstanding, especially at the most serious and important time of an outbreak of smallpox, when the means of prevention being in the hands of two Authorities in the same locality leads to much confusion, counter proposal, and delay.

When there is no epidemic a division of authority is not felt, but in time of epidemic the hour of trial comes, the difficulties arise, and in every epidemic there have invariably been serious delay and confusion of responsibility at the very time when smoothness and rapidity of working is most essential.

It has been stated that Sanitary Authorities and Boards of Guardians consist in many places of almost the same members. This is, to a certain extent, true; but the members who sit on these Bodies are always careful to confine their duties within the scope of their powers; and even if they desired to go beyond them, the Clerk of the Body would quickly check any such illegal action. So that the prevention of smallpox is and always must remain divided so long as one part is in the hands of one Authority, and another part of another, and courtesy frequently prevents one Board from criticising, advising, or stimulating another Board, the effect of which is not beneficial to the smooth working of what should be one homogenous system of prevention.

Vaccination means and methods could be immensely improved, and the opposition to it mitigated, if not entirely removed, but no improvement has taken or is likely to take place, so long as it is administered only for paupers, and the general public has to submit to a pauper system.

Guardian Boards have no special officer to report upon such a subject as the prevalence and prevention of smallpox in the community, and even if they had, the officer would not be in possession of sufficient information upon the subject.

It must be obvious that, however conscientious a Board of Guardians may be, they cannot possibly be so well acquainted with the requirements to prevent or meet an epidemic as the Sanitary Authority; but Boards of Guardians necessarily differ in conscientiousness.

It has happened over and over again that Sanitary Authorities have found it necessary to remind Boards of Guardians of their responsibilities and duties with regard to vaccination (see also "Lancet," May 2nd, 1896, p. 240). The Public Health Committee of the Ipswich Corporation in the last week of April, 1896, alarmed at the neglect of vaccination in the borough, drew the serious attention of the Board of Guardians to the risk being incurred. In Gloucester, in April, 1896, the Town Council found it necessary to remind the Board of Guardians that they were not by any means doing sufficient vaccination to stay the smallpox epidemic, and engaged a dozen medical men to make house-to-house visitation and vaccination throughout the city. In Warrington, during the epidemic of smallpox in 1892-3, the Health Committee had to take up the duty legally developing upon the Board of Guardians and to open five extra vaccination stations and provide extra vaccinators.

The responsibility, not only for stemming an immediate epidemic, but also for preventing a future epidemic, should be placed upon the Sanitary Authority. Accusations, on the one hand, that it is due to the insufficient provision of hospital accommodation, and, on the other, that it is due to insufficient vaccination, could not then be made by one public body against another.

Sanitary Authorities have notified to them all cases of smallpox, and consequently are immediately acquainted with the extent and locality of outbreaks, and know when and where vaccination is most urgent.

Every Sanitary Authority has an officer especially trained in the prevention as distinguished from the cure of disease, who is kept informed every moment of the prevalence of disease.

In case of an outbreak of smallpox, it falls upon the Sanitary Authority to receive the notifications, to provide for isolation and for disinfection, and in short to undertake the whole duty of combatting the disease; and in case of inability to cope with it, the odium also falls upon the Sanitary Authority.

The transfer of the control of vaccination should make no difference in the cost, as the same officers would carry out the work; but it would make a vast improvement in the administration, especially when under pressure, on account of the administration for the prevention of smallpox being in the hands of one public body only and worked as part of one public department in possession of such knowledge as to enable the staff and resources to be applied in the most effectual manner and to the fullest extent available.

It has been said that some Sanitary Authorities would do even less than some Guardian Boards in the matter. This is extremely unlikely, because any failure to prevent an outbreak of smallpox would expose the members of a Sanitary Authority to considerable odium, especially as they will have been constantly advised by an expert officer to keep the vaccination up to date.

Money invested, not only in vaccination, but also in re-vaccination, is well invested, and often saves thousands of pounds from being spent subsequently by Sanitary Authorities in hospital provision and other measures to meet epidemics.

It has been recommended that vaccination should be placed in the hands of a Central Authority. It is now in the hands of a Central Authority, the Local Government Board, which Board controls the administration of the Acts by the Boards of Guardians in the Poor Law Unions, and would equally control it if it were transferred to the Sanitary Authorities.

The Sixth and final Report of the Royal Commission on vaccination, paragraph 508, expresses the following forcible opinion:—

“ 508.—In connection with the subject with which we have been dealing, we may advert to the suggestion that the vaccination and the Sanitary Authority should in all cases be identical.

“ It has been pointed out that, whilst the isolation of patients in hospitals and otherwise is provided for by the Sanitary Authority, the extent of the provision requisite to deal with the outbreak of smallpox may depend upon the degree in which the vaccination laws have been enforced.

“ More hospital accommodation may be required when vaccination has been neglected than when the vaccination laws have been complied with.

“ It is contended that sanitation and vaccination, concerning, as they both do, the health of the people, should be under the jurisdiction of a single Authority, and the Sanitary Authority is the appropriate one for the purpose. Indeed, the advantage of placing in the same hands the supervision of vaccination, and of the other measures designed to prevent the spread of disease, are so great and so obvious that the proposal to do so deserves most serious consideration. Under present arrangements, however, such a proposal raises very great difficulties. Whilst in England and Wales there are only 648 Vaccination Authorities, the Sanitary Authorities exceed 1,700 in number. Moreover, whereas in some cases a borough, the Council of which is the Sanitary Authority, comprises parts of several unions, in other cases a single union contains within it many Sanitary Authorities. For example, the borough of Bristol includes the whole of one union and parts of two other unions. On the other hand, the Huddersfield and Halifax Unions contain no less than 25 and 19 Urban Sanitary Districts respectively. Many other instances might be cited to show that it would be impracticable to vest the sanitary and vaccination duties in all cases in a single Local Authority without a complete recasting of our present areas of local administration.

“ We are not in a position to devise a scheme which would accomplish, either wholly or partially, the desired result. At the same time we fully recognise the importance of achieving it, as far as possible, and we should regard with favour such changes as would render the amalgamation of the Vaccination and Sanitary Authorities feasible; or, indeed, any steps taken in that direction, even although they should only partially effect the object in view.”

*With regard to compulsion.*—It must be recognised that vaccination is an operation that, although slight, is not undergone for the sake of any pleasurable sensation, but is submitted to through fear. In the early days of vaccination it was the fear of smallpox, which was then a common disease, always more or less prevalent, causing great mortality and disfigurement. Later on, it became a disqualification for many careers, *e.g.*, the public services, not to be protected by vaccination. Later still, penalties were inflicted upon the civil population for neglecting vaccination. Latest of all, it has been suggested that vaccination by actual force is the only ultimate form of compulsion. Briefly put, mere persuasion is useless, especially amongst a more or less protected population, unacquainted with the horrors of smallpox, as people are not vaccinated for pleasure, but through fear; the only effectual impulse, therefore, is fear as a means of compulsion, and the only question to decide is the kind of compulsion, whether it is to be actual force, penalties, disqualifications, or disease. If the public elect to adopt the last, then it only remains to await outbreaks of smallpox to obtain the vaccination of the surviving but panic-stricken members of the community, and since it has been overwhelmingly proved that smallpox is by far most fatal to unvaccinated children, vaccination will be mainly obtained by a massacre of the innocents condoned by the State.

## CHAPTER III.—SANITATION

## SANITARY WORK GENERALLY.

Tables C (I, II, III, and IV) have been compiled as in previous years, and appended to Part III in this Report.

Tabular returns of sanitary works actually carried out should be appended to every Annual Report in the same way as tabular returns of births, deaths, and sickness. In many instances this has been done, but in some not so. The cases in which omissions occur have been already mentioned in the introduction to this Report.

Where no record appears in the Annual Report as to the number of any particular premises in a District, the number stated in a previous Report has been entered in the Tables lettered C.

## INSPECTIONS.

*Complaints.*—In 22 out of the 33 Districts, the total number of complaints received is recorded as shown in Table C (I).

*Infectious Diseases notified.*—The number of cases of infectious diseases notified is not stated amongst the sanitary work in some of the Reports, but a complete list of the cases notified has been compiled in the table headed “Notification of Infectious Diseases” in Section I of Chapter II of this Report.

*Premises periodically inspected.*—In 13 of the 33 Districts the number of premises periodically inspected at regular intervals is stated.

*House-to-house Inspections.*—In 14 Districts house-to-house inspections were carried on during the year.

*Total Inspections.*—In about one-half of the Districts the total number of inspections and re-inspections are recorded. Inspections vary widely in the amount of time they occupy, and Districts vary widely in the amount of inspection they require; nevertheless, they give some approximate idea of provision for inspection in proportion to population, houses, and premises generally.

*Notices.*—In 28 of the 33 Districts the number of notices given or orders issued are stated.

#### DWELLINGS.

*Dwelling-houses.*—In 26 of the 33 Districts the number of houses and premises cleansed and repaired is stated, in 13 the number closed as unfit for habitation, in 8 the number re-opened after repair, and in 7 the number demolished. In Willesden 9 illegal underground rooms were vacated.

Mr. H. M. Bullock (Heston and Isleworth) expresses the opinion in reference to the Housing of the Working Classes Act, that :—

“It would be a great assistance towards the proper housing of the working classes, if the Council would select suitable sites and build some model dwellings of a moderate size, and if the building of not more than four houses in a block, with a passage of 10 feet wide between each block could be insisted upon.”

Mr. B. Campbell Gowan (Hendon Rural District) also reports as to the housing of the working classes:—

“There is some prospect of an improvement in this important matter. Many cottages have recently been built in various parts of the District, notably in Harrow Weald, and others are, I believe, in contemplation, but still their number is too few to allow us to put due pressure upon the owners of the rookeries which still remain an eyesore to their neighbours, and a source of anxiety to your Sanitary Inspector and myself. Yet I am thankful to say that many of them have been “spruced” up and improved, and throat illness, formerly so common in them, has much decreased, both in frequency and intensity. There is no room for doubt that the improved sanitary condition of much of the cottage property has materially helped to bring the death-rate down to its present satisfactory level. This improvement has been gradually and steadily effected, without unduly straining the powers of the Board, or causing hardships to those little able to bear it.”

Mr. C. Dwight Morris (Staines Rural District) reports:—

“The condition of some of the cottages and their sanitary arrangements leaves very much to be desired, many properties being nothing less than recurring nuisances. Many of the cottages are built with the ground floors too low. In a District like ours, where the subsoil water is a very fluctuating element, coupled with the fact that the drainage goes into the same area, greater care should be shown in keeping the ground floors well above ground, in order that a current of air is allowed to play right through the building. Where this is done the flooring in many cases is so badly fitted that the tenants promptly cover up the

outside grating, to keep out the draught. Proper damp-courses are being used more of late years, but even in this particular active supervision is very much required in order to carry it out properly. If slate set in cement were always used, damp walls would be a novelty, and many of the cottage homes would be more comfortable and healthy. A very great scope is open in your District for the improvement of the homes of the working classes. The materials, such as bricks have been so dear during the last year that this alone has had a very definite influence of a retarding character in the development of this class of property. Every year I have pointed out the necessity of having proper control over these most important matters, and I sincerely hope that the time is not far distant when the jerry builder will be a thing of the past."

*Underground rooms.*—In his recently published (1897) Weber-Parkes Prize Essay on Tuberculosis, Dr. Ransome, of Manchester, has described his experiments, which prove that light (daylight and sunlight) and air (moving air and winds) and dryness are fatal to the tubercle bacillus, and that darkness, stagnation, and dampness are favourable to its growth. He records experiments in which he readily succeeded in growing the bacillus on ordinary damp wall papers, and papers moistened with various condensed vapours, including the vapour of ground air from beneath basement rooms, and the vapour of human breath. These experiments demonstrate the special risk of injury to health run by those who occupy as dwellings underground rooms from which light and air are more or less excluded, the walls of which are more or less imperceptibly damp in the absence of a damp-proof course, the soil and subsoil of which admit ground-air and vapour in the

absence of an impervious surface and of independent ventilation below the floor, and the interiors of which are occupied, especially at night, by human beings respiring and perspiring.

*Paving of Yards.*—The necessity for preventing the pollution of the soil in the yards and areas of town houses by impervious surfaces has met recently with strong confirmation (1) from the observations of Sir Richard Thorne, K.C.B., F.R.S., in his address on “Soil and Circumstance in their Control of Pathogenic Organisms”; (2) from the laboratory experiments of Dr. Sydney Martin, described in the Medical Officers’ Supplement to the Twenty-sixth Annual Report of the Local Government Board, 1896–97, in which he shows that the typhoid bacillus multiplies in the polluted soil of towns, and dies out in the virgin soil of the country; and (3) from the practical outdoor experiments of Dr. John Robertson, M.O.H. of Sheffield, published in the “British Medical Journal” of January 8th, 1898, by which he has shown that under natural outdoor conditions the typhoid organism is capable of growing very rapidly in polluted earth, and can apparently survive from one summer to another in such soil.

Hence it is to be concluded that paved, levelled, and drained yards and watertight drains are essential where the residents desire to be secure against typhoid fever.

*Standards of Sanitation of Dwelling Premises.*—In judging of the degrees of sanitation, it is necessary to distinguish between a nuisance actually injurious to health, a nuisance dangerous to health, and a nuisance prejudicial to health, also other acts of commission and omission that may

possibly be considered detrimental to health or comfort, and, further, also those improvements that may be made in structure, fitting, or arrangement, that contribute to comfort and convenience, and tend to protect and improve health.

Thus, for convenience sake, it may be possible to adopt four standards of sanitation:—

1. *A nuisance standard* in which actual danger or prejudice to health can be shown.
2. *A statutory standard* in reference to many conditions specifically defined by statute, *e.g.*, underground dwellings.
3. *A bye-law standard* in reference to many structures and Acts detailed in bye-laws, *e.g.*, paving of yards.
4. *A premium standard.* This is the standard no doubt intended by the Customs and Inland Revenue Acts, 1890, sec. 26, and for which exemption from inhabited house duty is offered as a premium.

*Houses let in Separate Dwellings or Lodgings.*—In Willesden District, 320; in Hendon Urban, 90; in Uxbridge Urban, eight; and, in Heston and Isleworth, three houses are registered under bye-laws for houses let in lodgings. In 10 Districts it is recorded that none are registered, and the presumption is that this applies to the remaining Districts.

*Common Lodging-houses.*—Of registered common lodging-houses there are seven in Brentford, six in Tottenham, four in Willesden, four in Uxbridge Urban, two in Heston

and Isleworth, and one in Edmonton District. In 10 Districts it is stated that there are none, and presumably there are none in the other Districts.

*Canal Boats used as Dwellings.*—In Brentford, 242; and in Uxbridge Urban District, 13 canal boats are registered, these two Districts being Registration Authorities. In six other Districts, through which canals flow, a considerable number of inspections is also recorded, and contraventions of the Regulations checked.

*Movable Dwellings.*—In 13 Districts caravans, tents, and sheds, occupied as movable dwellings were dealt with, and nuisances caused thereby abated.

#### PUBLIC BATHS.

Some of the Districts surrounding London have public baths, but no record appears of this provision, which is nevertheless of great sanitary importance.

#### SCHOOLS.

Referring to Table C II., in 23 of the 33 Districts, the number of schools is stated, and in the majority of these they are inspected. Broadly speaking, schools may be divided into two or three classes, namely, (1) Board Schools, (2) other schools receiving grants from the Education Department, and (3) schools not under the Education Department.

It need scarcely be said that the grant of the Education Department is dependent upon the regulations in the Code being conformed to, and sanitary conditions are important matters in schools. The Code of the Education Department, published annually, should be in the hands of every Medical Officer of Health, and the health of the young

population is of fundamental importance to every Sanitary Authority.

Dr. W. T. Watson (Tottenham), in adverting to the condition of Board Schools, says :—" During the year the special attention of your Council has been directed to the condition of the schools within the district, and the Sanitary Inspector has made a careful and thorough examination of the drainage, ventilation, water supply, &c., and detailed reports have been furnished by him to the School Board Authorities. The work of rectifying the insanitary conditions set out in these reports is being proceeded with. It is, of course, needless to point that it is of paramount importance to keep the sanitary condition of Board Schools, where large numbers of children are congregated, up to a very high standard, and in future periodical inspections will be made of the schools in the district, with a view of removing any doubt as to their condition. "

#### WORKSHOPS AND FACTORIES.

*Sanitary conveniences.*—Medical Officers of Health come into communication with H.M. Inspectors of Factories from time to time, and traverse part of the same ground, and it is therefore very desirable that there should be some distinct understanding as to the number of sanitary conveniences to be provided in factories, workshops, and workplaces.

For the purpose of framing such a standard other recognised standards may be of assistance.

It is provided in the Model Bye-laws of the Local Government Board with respect to houses let in lodgings to members of more than one family, that the landlord or owner of any such lodging-house shall provide and maintain in connection with such house, water-closet, earth-closet, or privy, accommodation in the proportion of

not less than one water-closet, earth-closet, or privy, for every twelve persons, and the same provision is made in the Bye-laws of the London County Council, with reference to water-closets, earth-closets, and privies. In this case the standard of one w.c. for every twelve persons applies to dwelling-houses, places where persons may or may not work, but where they certainly live and sleep.

In the Code of Regulations for Day Schools of the Education Department, the following are the standards adopted:—

Number of Children.	Number of W.C.'s required.		
	For Girls.	For Boys.	For Infants.
Under 30 children ..	2	1	2
„ 50 „ ..	3	2	3
„ 70 „ ..	4	2	3
„ 100 „ ..	5	3	4
„ 150 „ ..	6	3	5
„ 200 „ ..	7	4	6
„ 300 „ ..	8	5	7
		Urinals in proportion.	

These figures work out proportionately as follows:—

Under 30=1 w.c. for every	} 15	30	15
„ 50= „	16 $\frac{2}{3}$	25	16 $\frac{2}{3}$
„ 70= „	17 $\frac{3}{4}$	35	23 $\frac{1}{3}$
„ 100= „	20	33	25
„ 150= „	25	50	30
„ 200= „	28 $\frac{4}{7}$	50	33 $\frac{2}{6}$
„ 300= „	37 $\frac{4}{8}$	60	42 $\frac{6}{7}$
		Urinals in proportion.	

These standards are unnecessarily numerous and complicated. It is quite possible to frame a more general and simple standard that should not be too low sanitarily, nor too high pecuniarily. It will be observed that if the number of scholars increases from 200 to 300, there is only one extra w.c. required for the additional 100 children.

One water-closet for every twenty persons in workshops and factories has been generally regarded by some of the Officers of Sanitary Authorities as a standard provision, and in many Districts of England this standard appears to have been adopted.

*Workshops.*—In 14 Districts the number of workshops and workplaces is stated, and in most of these Districts they are inspected at intervals.

*Laundries.*—In 15 Districts the number of laundries is stated, and in most of them the number of inspections also.

*Bakehouses.*—In 24 of the 33 Districts, the number of bakehouses is recorded, and in 22 the periodical frequency or number of inspections is noted. There still remain a few Districts without any record.

#### SLAUGHTER-HOUSES.

Twenty-four Districts report the number of slaughter-houses they contain, and put on record the number of inspections of these premises during the year. Seven Districts still furnish no return.

## COWSHEDS, DAIRIES, AND MILKSHOPS.

A fairly full record as to premises purveying milk is made, but in some half-dozen instances there are no statements as to supervision. The supervision of milk supplies is of such immense importance to health, that every effort should be made to make it effectual.

Under the head of phthisis and tuberculosis in Section I, Chapter II, of this part of this Report, a series of remarks upon the supply of milk and tuberculosis are quoted, and especially in reference to the protection of the health of cows, and other animals.

## FOOD.

*Unsound Food.*—No diseased animals appear to have been seized during the year, but in 8 Districts unsound food of various kinds was seized and destroyed.

*Adulterated Food.*—Southall-Norwood is the only District in which samples under the Sale of Food and Drugs Act appear to have been taken

## OFFENSIVE TRADES.

In Uxbridge Urban District there are 2 offensive trades premises (in Greenford 1, and in Hampton 1) which are inspected from time to time. In 6 Districts it is definitely stated that there are none.

## MORTUARIES.

Some 12 Districts are definitely stated to possess mortuary accommodation, and 5 Districts are equally definitely stated to possess none. The rest are silent as to accommodation.

## BURIAL GROUNDS, &amp;c.

Mr. C. E. Goddard (Wembley Urban District), in speaking of disposal of dead, remarks that:—"With reference to the Burial Ground Extension in the Wembley Ward, I understand that you have been approached with a view to enlarging the present graveyard, but I imagine you would hesitate to continue to bury your dead in the centre of the District, which is rapidly increasing, especially bearing in mind the nature of the soil. I would respectfully suggest that the new cemetery should be at least a mile away from the most inhabited part for sanitary reasons, and quite apart from the fact that the land adjoining the Church is getting annually more valuable.

What really is needed, is a properly constructed crematorium for this part of Middlesex. Sentiment and prejudice may delay it, but it must come, and supposing some united action were possible among the neighbouring District Councils, the matter would be accomplished sooner than we anticipate. One thing is certain that we should all use our best efforts to prevent more of our country being used in graveyards than is absolutely necessary."

Nevertheless, we have to thank our forefathers for the old burial-grounds, which, now converted into gardens, form breathing spaces, and pleasant oases amidst the deserts of houses in our large towns.

## WATER SUPPLY AND WATER SERVICE.

*Wells.*—Table C III shows that only 6 new wells appear to have been sunk, 1 in the Staines Urban, and 5 in the Staines Rural District. Some 22 wells were cleansed and repaired. No less than 41 were closed.

as polluted, and in the previous year 45 were also closed, so the number of shallow wells is gradually, year by year, being reduced, and the number of houses supplied from mains is steadily increasing. In 16 of the 33 Districts the percentage of houses supplied from the mains varies from 80 to 100.

*Water Works.*—The supply of water under pressure, if intermittent, causes cisterns to be used more freely, but their use necessitates vigilance as to periodical cleansing, and to protection by covering and disconnection from sources of pollution. This vigilance appears to have been exercised to a considerable degree, and is especially important in the disconnection of overflow pipes from drains, and the disconnection of w.c.'s from general cisterns by providing secondary flush tanks for closets.

In reference to new works provided by the Sanitary Authority, Dr. J. J. Ridge (Enfield) reports that:—"The new works at Ponder's End, for the supply of water, have been proceeding slowly, but I am not yet in a position to say positively that all surface-water is excluded. Owing to the proximity of the open ditch down which the Cheshunt effluent runs, and often in a very foul state, it is absolutely necessary that this influx should be quite impossible; but in addition to that, the effluent should be conducted in a watertight channel, whether closed or open."

Mr C. A. Patten (Ealing) draws attention to the importance of vigilance:—"The question of water supply is one that has necessarily occupied the attention of the public generally in a far greater degree than usual, owing to the severe epidemics of enteric fever at Maidstone, Lynn, and elsewhere. As is well known, we in this

District are not dependent upon local sources for our supply, and I think we have every reason to feel satisfied with the excellent quality of the water supplied by the Company that serve us, as evidenced by the usually favourable reports furnished monthly by the responsible authorities. This does not, however, exonerate us from the necessity of seeing that the cisterns and receptacles into which the water is delivered are properly and frequently cleansed; and, whenever possible, I have never ceased to advocate the water used for drinking and culinary purposes being drawn from the main. It may be a useful precaution to drink boiled water, but where the water is obtained direct from the main I do not think that, in this District at least, this measure is at all indispensable. Should the existence of a well in this District come to my notice, I invariably have the water tested by the competent Analyst employed by your Council, and whenever there is evidence of organic contamination an order for closure of the well is at once issued."

Many Sanitary Authorities now provide for the periodical chemical and bacteriological examination of the water supply by specialists in chemistry and bacteriology, and this becomes the more necessary the more the supply is derived from one source, namely, the District water-works, instead of from isolated wells. In the latter instance pollution may injure only one family, in the former the whole population may suffer, if timely vigilance is not constantly maintained.

Dr. J. D. Windle (Southall-Norwood) reports :—" Broadly speaking, any water that requires filtration after it has reached the premises is unfit for drinking. Domestic

filtration of water is impracticable, it more often pollutes the water than purifies it. Especially is this the case when charcoal filters are used. They require the most constant supervision to ensure cleanliness, since the pores of the charcoal become clogged with all the decomposing suspended matters of the water which is passed through. It has been proved that water after it has passed through such filters often contains more organic matter than it did before filtration. Only recently I had occasion to attend professionally a family for sore throats and gastrointestinal disturbance, the source of which was clearly proved to be contamination of the drinking water by 'filtration' through a charcoal filter. The carbon of the filter was in a very foul condition. It had not been removed since purchase, and had been in use for some considerable time. The only safe way to render a suspicious water potable is to boil it."

It may be added that, under certain circumstances, if necessary to filter water, the only kind of domestic filters that are trustworthy are those consisting of porcelain or siliceous earth, such as the Pasteur-Chamberlain and Berkefeld filters. But, boiling, and infusing tea, coffee, and similar preparations, are recognised all over the world as the best protection that human experience, unskilled in science, has adopted from time immemorial for domestic purposes.

Dr. Wentworth Tyndale (Hampton) mentions the occurrence of a somewhat unusual nuisance in connection with the supply of potable water, namely, an accumulation of sand taken from the filter beds of a water company during the dry weather, and allowed to become extremely offensive.

*Intermittent and Constant Supplies.*—In reference to the water supply of Chiswick, Mr. F. C. Dodsworth reports:—“ I have the satisfaction of remarking that the District has now a constant supply to each house. The importance of this cannot be overrated. A draw-off tap has been supplied to 300 houses, which enables the occupiers to obtain the drinking water direct from the main, instead of through cisterns, which are too frequently both dirty and uncovered.”

It is one great advantage of the constant system of supply, that it enables the draw-off taps to be removed from the cistern and to be fixed on the house main, leaving the cistern to act as a reserve for the flush tanks of the w.c.'s, in case of a temporary stoppage of supply, and rendering the drinking water independent of the cleansing, repair, position, and construction of the cistern.

#### DRAINAGE AND SEWERAGE.

*Privies.*—These are being gradually replaced by movable receptacles, as ash and earth-closets, or by water-closets.

*Water-closets.*—In 14 of the 33 Districts the proportion of houses provided with water-closets is from 75 to 100 per cent. In the construction of new closets, and the ventilation of old, in the provision of new apparatus, and the repairing, cleansing, and supplying with water of old, a considerable amount of work appeared to have been carried out, as shown in Table C III.

*Drains and Sewers.*—In reference to drainage and its details, a large amount of work also appeared to have been accomplished. Although many cesspools continue to be

maintained, rendered impervious, emptied, and cleansed, a considerable number were abolished, and in 11 Districts it is recorded that from 90 to 100 per cent. of the houses are connected with the sewers, great lengths of which have been newly constructed or re-constructed in some Districts (see Table C III).

Mr. C. Dwight Morris (Staines Rural District) reports, in reference to drains, that:—"There has been great activity shown in several parishes of your District with regard to the erection of house property, more particularly in the parishes of Ashford and Feltham. I am also pleased to see that, notwithstanding the absence of control over this matter by your Authority, a very great improvement is manifest in general construction, but the same old carelessness is constantly shown in the construction of drains, &c., which, sooner or later, must give trouble. The attention of your officers is called to the same, often when the mischief has been going on a considerable time. This is not true sanitary progress, and unfortunately it cannot be controlled unless the more important of your parishes take upon themselves full Urban powers, in which event such an anomalous state of things would not occur easily. The laying out of new estates grows apace, and the difficulties will be immensely intensified in a few years, unless the plans are submitted to a proper governing authority, and carried out to that authority's complete satisfaction. The existing examples of how things ought not to be done, ought to be sufficient evidence to direct those in authority, and give the required impetus to correct the grossly insanitary private roads. The application by your Authority to adopt the special Act dealing with this condition, has not met with that success it deserved,

the Local Government Board specially emphasising the necessity of sewerage the same before giving the required sanction."

### SEWAGE DISPOSAL.

For a full account of the various methods, &c., adopted, reference must be made to the Report for the year 1894. The few amendments and improvements made since then are recorded in the Reports of the several years since that date.

A further account of the details of sewage disposal in the Hendon Urban District, is given by Mr. F. W. Andrew:—"The following is a rough outline of our present system:—The crude sewage, after passing through a screening chamber, is mixed with the chemical precipitant, ferozone, which consists mainly of sulphate of alumina, in the proportion of 8 to 10 grains per gallon of sewage; the clarified effluent is first filtered through the high-level filters, and then through the land and polarite filters. The sludge is dealt with by passing over the land, on which is grown various crops. A certain proportion is pressed, but varies according to the time and weather, and also to the state of the land, as to whether it is in a fit state to receive it. This latter difficulty is now done away with, by an additional area of eight acres having been provided for the sludge. The high-level filter beds were thoroughly cleansed on the taking over by the Council the treatment themselves, and graded to a uniform fall of 1 in 75, and covered with three inches of Leighton Buzzard sand.

"The cost of the sewage disposal by the Council for the year ending 31st March, 1897, was £979 17s. 7d., or

£6 6s. per million gallons. Dry weather flow, 425,000 gallons; the population draining to the works being about 14,500. The cost of sewage treatment entailed a rate of  $2\frac{3}{4}$ d. in the £ for the year."

### POLLUTION OF STREAMS.

The principal tributaries of the Thames liable to pollution from sewage effluents in Middlesex are the Brent, the Crane, the Lea, and the Colne, and their tributaries.

With reference to the Brent, Mr. G. Hope (Hanwell) reports,—“During the year, the matter that has required the greatest amount of time and attention of the Council and its officials, has been the state of the River Brent. Your late Medical Officer of Health and myself, since my appointment, have made frequent inspections of the stream. The Hanwell Council is in the unfortunate position of being at the lower end, and receiving and being credited with causing the suspended filth that is washed down from the badly managed sewage farms of Councils higher up, against whom actions have been taken, but who, by successful applications for extension of time, &c., have succeeded in prolonging the nuisance.”

The same Medical Officer of Health reports, in reference to Greenford and this river—“As regards influences affecting the public health within the District, our greatest trouble has been caused by the polluted state of the River Brent. This nuisance has continued for such a length of time, that it is now one of ancient history. Your late Medical Officer of Health reported fully upon this question

in his last annual report, and the active steps taken by this Council to put an end to the nuisance was mentioned. However, the offending authorities higher up the stream, by getting repeated extensions of time, &c., have delayed matters so that the nuisance has not vanished yet, but the state of thing is much improved."

Dr. Skinner (Willesden) enters fully into the question of the condition of this stream—"The River Brent has given rise to a great deal of anxiety, of which the Canal Company have been a great cause through the withholding of water from the natural channel. I am very glad to understand that the Middlesex County Council are seeking powers to deal with the rivers, and trust that Parliament will restore to the River Brent, if not all, at least a great portion of the water which is now kept from it. Until that is done, it seems impossible that the various Authorities along the course of the river can ever hope to have it in a proper and natural condition. I have made an inspection of the lower reaches of the river during the summer, and reported to the Chairman of the County Council as follows: "During the afternoon of August 19th I visited the Brent with Mr. Humphreys at various points, commencing at Perivale, close to the church. The water, though shallow, extended across the bed of the stream, was to a certain extent muddy in appearance, but not black or smelling offensively; there was a slight odour of chlorine. The next point visited was at Vicar's Bridge; here it was more muddy, but there was no unpleasant odour; a person living near said he had not noticed any smell for nearly three weeks. In passing through Twyford I examined the stream at several points; the same muddy appearance, a faint odour of chlorine on the hand being dipped in the

water, no other smell. While standing over the water on a plank, there was no unpleasant odour. Between the point where the river is crossed by the canal at various places up to the Harrow Road, it was the same; the bed of the river, where visible, had no black, foul-looking deposits. I detected no foetid odours from the water at any point. Where the water had been kept back by a dam, it had the same appearance. The muddy condition of the water was due to surface water entering the river from the Mitchell Brook, after heavy rains, at intervals, during the previous twenty-four hours."

In reference to the condition of the Brent above the Hendon Reservoir of the Grand Junction Canal Company, at the Welsh Harp, Mr. F. W. Andrew (Hendon) writes: "I have devoted a good deal of time and attention to the condition of the Hendon effluent from the sewage works. In the middle part of the year, unwarrantable attacks were made by a certain gentleman high up in the sanitary world, upon the bad condition of the Brent stream, mainly due, according to his statement, 'to the foul condition of the Hendon effluent.' He also went on to state, that 'lumps of sewage' were passing from the works into the stream. These statements have been thoroughly discussed by your Surveyor in every detail, and in the public press. It only shows how carelessly the gentleman in question made his investigations, for, had he taken the trouble to look at the effluent, which he never could have done, and especially if he had visited the Sewage Farm, he would have found it impossible for any solid matter to get into the stream. On the other hand, if he had examined the lumps more closely, he would have found that they were perfectly harmless, being pieces of decayed matter rising

up from the bed of the river, due to the action of the hot sun at that time of year. The County Council have also reported that their Surveyor, having visited the farm, found the effluent good, and could see no foundation for the statement made by the gentleman in question. I have made numerous analyses of the effluent, and am very pleased to be able to state, that the results are far better than they have been for years, due, undoubtedly, to the much better measures taken in the working of the Sewage Farm, since the Council have taken over the management themselves."

Dr. W. T. Watson (Tottenham) describes the condition of the Moselle Brook in his district:—"The condition of this stream has been considerably improved since 1894, but I have reason to believe that there is still some pollution of the water going on.

"I would again direct the attention of the Council to the importance of having the stream thoroughly cleaned out and examined before the summer weather sets in.

"I have before now pointed out that watercourses such as this should be kept as free as possible from pollution, either by sewage matter or decomposing animal or vegetable matter."

Mr. C. Dwight Morris (Staines Rural) describes the condition of the Ash River in his district:—"As a result of very many just complaints concerning the management of the Staines Urban District Council sewerage works, and the serious pollution of the River Ash, which runs through the S.W. part of your district, from the effluent of these works, by your desire I made a special report dealing with

the matter, copies of which were duly forwarded to the Local Government Board and the County Council as required. The complaints were well grounded in every particular, but it was difficult to associate any definite illness from the effluvia emanating at different times from the works. The system known as the "Reeves," in dealing with the sewage immediately upon delivery at the works, has been adopted, and notwithstanding certain preliminary difficulties which had to be overcome in reverting to this process, it has so far cured the evil and is apparently a great success, complaints being now conspicuous by their absence. The effluent, which used to go directly into the River Ash, is now utilized on the land, which fact has removed a very serious pollution, the stream being very much improved, so much so that cattle now drink it with impunity."

#### SCAVENGING.

*Refuse Storage.*—A number of dust-bins were repaired and many more new bins provided, a certain number of movable receptacles being substituted for fixed (*see* Table C, IV).

*Refuse Removal.*—In 16 districts a weekly collection of dust takes place, and in 4 a fortnightly collection. In Willesden the weekly collection is from house to house, the only reliable form of weekly collection.

*Refuse Disposal.*—The difficulties of disposal are overcome in various ways in different districts, those districts that have destructors erected are however relieved of many of these difficulties.

In Hampton Wick Dr. Gunther reports that:—"Seventeen complaints of non-removal of house-refuse were received,

and they were promptly attended to. The refuse of this and other districts is being carted into the Home Park, for the purpose of filling up depressions near the entrance. It is to be hoped the work will be completed before the summer, and the adjoining ditch piped. It is anticipated the authorities of Hampton Court will cover the refuse from time to time with mould, and so prevent as far as possible an evil which might become a source of danger to health."

The same Medical Officer of Health reports in reference to Teddington :—"The removal of the contents of dust-bins is now effected once a fortnight, yet there is a steady application for more frequent attention, especially in those cases where the portable sanitary dust-bins are very small. Many of the complainants desire weekly scavenging, and a few would like to see the dustman oftener than this. Several complaints have also been received in reference to the practice of tipping house refuse in gravel pits behind houses in course of erection."

Dr. W. T. Watson (Tottenham) advocates the construction of a refuse destructor :—"As I said in my Report for 1896 difficulties of a serious nature have been experienced in connection with the collection and disposal of house refuse, and every year brings with it a greater need for an efficient method of dealing with dust, &c., after collection. It is reasonable to assume that within the next two or three years there will be little or no accommodation for the refuse collected in the District, and certainly by that time it would be dangerous to deposit in the midst of a large number of houses large quantities of such matter."

## LEGISLATION.

During the year the following Acts of sanitary importance were added to the statutes :—

60 and 61 Vict., Chap. 31. An Act to permit Local Authorities to provide cleansing and disinfection for persons infested with vermin.

60 and 61 Vict., Chap. 57. An Act to amend the law for the better protection of infant life.

*The Cleansing of Persons Act, 1897*, provides that any Local Authorities (Sanitary Authorities and Boards of Guardians) shall have the power, when in their discretion they shall see fit, to permit any person who shall apply to the said Authority, on the ground that he is infested with vermin, to have the use, free of charge, of the apparatus (if any) which the Authority possess for cleansing the person and his clothing from vermin. The use of such apparatus shall not be considered to be parochial relief or charitable allowance to the person using the same, or to the parent of such person, and no such person or parent shall by reason thereof be deprived of any right or privilege, or be subject to any disqualification or disability. Local Authorities may expend any reasonable sum on buildings, appliances, and attendants that may be required for the carrying out of the Act.

*The Infant Life Protection Act, 1897*, is an Act for the purpose of improving the detection of baby-farming.

Several Appendices to the Report of the Royal Commission on Vaccination were issued during the year.

## ACTS, BYE-LAWS, AND REGULATIONS.

In Part II, the Summaries of the Reports of each of the Districts, the Acts, Bye-laws, and Regulations adopted and in force in each District, where stated, will be found.

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## PART II.

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### SUMMARIES OF THE REPORTS OF THE MEDICAL OFFICERS OF HEALTH OF THE DISTRICTS OF THE COUNTY, URBAN AND RURAL, IN ALPHABETICAL ORDER.

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The Rural Districts follow after the Urban.

The birth-rates and death-rates are per thousand of population living the infantile mortality-rates are per thousand births.

Details of the vital statistics and sanitary work, extracted from the Reports, will be found collated in Tables A, B, and C (I), (II), (III) and (IV), in Part III. These Tables may be regarded as supplementing the Summaries.

In the Summaries of the Reports of the Medical Officers of Health of the Urban and Rural Districts of the County, a more or less methodical arrangement is adopted so far as the forms in which the various Reports are cast will allow. The facts are grouped as follows:—Name of District, Medical Officer of Health, Estimated Population, Births and Birth-rate, Deaths and Death-rate, Deaths under one year and Infantile Mortality-rate, Statistical Notes, including Zymotic Death-rate, Infectious Diseases Notification, Epidemics, Hospital, Ambulance, Disinfection, Vaccination, Water Supply, Drainage and Sewerage, Sewage Disposal, Pollution of Streams, Refuse Removal, Refuse Disposal, other notes of sanitary work, and Adoptive Acts, Bye-laws, and Regulations in force.

### ACTON URBAN DISTRICT.

Medical Officer of Health, G. A. Garry Simpson, M.R.C.S.

Estimated population, 31,632.

Births, 973 ; Birth-rate, 30·7.

Deaths, 503 ; Death-rate, 15·9 (including 33 dying without the District).

Deaths under 1 year, 193 ; Infantile mortality-rate, 198·3.

*Mortality Statistics.*---The deaths of 33 residents of Acton, who died in public institutions outside the District, are included in the total deaths. The number of deaths from zymotic diseases was 130, equal to a rate of 4·1 per 1,000 of population ; of these deaths 80 were due to diarrhoea, and 28 to diphtheria.

*Infectious Diseases Notification.*---The Act has been in force since 1890 in the District. During the past year, 221 cases of notifiable diseases were certified, compared with 259 in the previous year.

*Epidemics.*---During the summer there was an outbreak of epidemic diarrhoea, causing 80 deaths and a high infantile mortality. In the third quarter of the year, diphtheria was unusually prevalent.

*Infectious Hospital.*---There is no accommodation for the isolation of infectious cases.

*Sanitation.*---Certain houses unfit for human habitation were demolished.

## BRENTFORD URBAN DISTRICT.

Medical Officer of Health, Henry Bott, L.R.C.P, M.R.C.S.

Estimated population, 14,806.

Births, 576; Birth-rate, 38·9.

Deaths, 231; Death-rate, 15·6.

Deaths under 1 year, 83; Infantile mortality-rate, 144.

*Statistics.*—The number of deaths from the principal zymotic diseases was 38, equal to a death-rate of 2·5 per 1,000, as compared with 4·6 in the previous year.

*Infectious Diseases Notification.*—During the year, 181 cases of infectious diseases were notified, as against 101 in the previous year.

*Epidemics.*—Scarlet fever was prevalent, 145 cases, but only one death. Diarrhœa caused 29 deaths. A case of typhus was found on board a canal boat, and promptly removed to hospital.

*Isolation Hospital.*—131 cases of scarlet fever were admitted to the hospital, all of which recovered; in November the hospital was full. It is suggested that all charges to ratepayers and their families should be abolished.

*Sanitary Work.*—Many old and dilapidated houses are being pulled down or reconstructed, and new houses for the working class being built. Attention is again called to the necessity for registering houses let in lodgings, in order to prevent overcrowding.

## CHISWICK URBAN DISTRICT.

Medical Officer of Health, F. C. Dodsworth, L.R.C.P.,  
M.R.C.S.

Estimated population, 25,972.

Births, 789; Birth-rate, 30·37.

Deaths, 348; Death-rate, 13·39.

Deaths under 1 year, 105; Infantile mortality-rate, 133.

*Statistics.*—The number of deaths from the principal zymotic diseases was 57, equal to a rate of 2·23 per 1,000, as against 3·05 for the previous year.

*Infectious Diseases Notification.*—During the year, 176 notifications of infectious diseases were received, compared with 320 in the previous year, and 118 in 1895.

*Epidemics.*—As in other Urban Districts, diphtheria steadily increases in prevalence. Diarrhoea was prevalent in the third quarter of the year.

*Isolation Hospital.*—The temporary hospital in Chiswick Lane, opened in January, 1896, was closed in February, 1897, but a site has, after much difficulty, been obtained for a permanent hospital.

*Water Supply.*—The District is served by the West Middlesex and Grand Junction Water Companies, and the bacteriological examinations of the supply have been satisfactory. Every house is now on the constant system of supply. 300 houses have now draw-off taps on the house main for the direct supply of drinking water without the intervention of a cistern.

*Refuse Removal.*—It is hoped that the use of motor wagons for the collection of dust will prove an economical success, and it is probable that a refuse destructor will be erected during the coming year.

*General Sanitation.*—It is contemplated to purchase an open space, known as the “Homefields,” as a playground. “Public baths are much needed, and would prove a great acquisition” to the District.

#### EALING URBAN DISTRICT.

Medical Officer of Health, C. A. Patten, L.R.C.P., M.R.C.S.

Estimated population, 33,000.

Births, 589; Birth-rate, 17·8.

Deaths, 308; Death-rate, 9·3.

Deaths under 1 year, 63; Infantile mortality-rate, 106·9.

*Statistics.*—The principal zymotic diseases caused 33 deaths, as compared with 56 in the previous year; the zymotic death-rate was therefore 1·0 per 1,000.

*Infectious Diseases Notification.*—The notifications received during the year numbered 156, compared with 141 in the previous year.

*Isolation Hospital.*—87 cases of infectious disease were under treatment in the Isolation Hospital during the year. “The enlargement of the Institution has become a public necessity, and will, ere long, be carried out,” as on more than one occasion it has been fully occupied.

*General Sanitary Work.*—A Certificated Inspector of Nuisances was appointed during the year. The surface-water drainage of the District south of the Great Western Railway is completed, and the rainfall kept out of sewers as much as possible, to minimise the work thrown upon

the Southern Sewage Works, where the tank space has been increased. The Northern Sewage Farm, at Perivale, is also in good working condition.

#### EDMONTON URBAN DISTRICT.

Medical Officer of Health, C. D. Green, M.D., F.R.C.S., D.P.H.

Estimated population, 33,966 (including 162 in Edmonton Workhouse).

Births, 1,099 ; Birth-rate, 32·3 (including 11 in Edmonton Workhouse).

Deaths, 542 ; Death-rate, 15·95 (including 473 in District, 30 in Edmonton Workhouse, and 39 outside District).

Deaths under 1 year, 184 ; Infantile mortality-rate, 167·4 (including 175 in District, 2 in Edmonton Workhouse, and 7 outside District).

*Statistics.*—The Strand Workhouse and Schools (population, 1,365 ; births, 4 ; total deaths, 84 ; deaths under 1 year (5) have been totally excluded from the above statistics. Part of the Edmonton Union Workhouse has been included, the numbers being set out in full in the Report, as follows :—

Parish.		Population.	Births.	Deaths.
Edmonton..	..	162	11	30
Tottenham	..	220	15	44
Hornsey ..	..	48	6	23
South Hornsey	..	23	2	6
Enfield ..	..	76	4	15
Wood Green	..	52	3	11
Southgate	..	19	2	9
Cheshunt ..	..	31	4	6
Waltham ..	..	19	—	3
Total..	..	<u>650</u>	<u>47</u>	<u>147</u>

39 Edmonton residents died without the District, of whom 17 died in the Tottenham Hospital.

The corrected number of deaths from the principal zymotic diseases was 125, equal to a rate of 3·7 per 1,000 of the corrected population.

Two deaths were registered as uncertified, and no inquests were held upon them.

*Infectious Diseases Notification.*—The number of cases of infectious diseases notified during the year was 323, as compared with 396 in the previous year.

*Epidemics.*—There was a severe visitation of diphtheria during the year, 91 cases being notified; certain Board Schools, apparently, largely contributing to spread the disease. Measles was also prevalent to a considerable degree. The high rate of mortality from diarrhoea was maintained during the year, and Dr. Green suggests some measures that might possibly diminish the mortality (see Part I of this Report under the head of diarrhoea).

*Isolation Hospital.*—No proper provision has yet been made. An agreement is made with the Smallpox Hospital to receive a limited number of smallpox cases, and with the Enfield Hospital to receive scarlet fever cases when there is room, but for diphtheria and enteric there is no accommodation whatever.

*Sanitary Work.*—Increased office accommodation is under consideration. A conviction was obtained against a person registered under the Infant Life Protection Act for failing to notify the deaths of certain infants to the Coroner. A slaughter-house that became a dangerous

structure has been partly demolished. In two cow-sheds the number of cows has been diminished. A Building Inspector has been appointed during the year to relieve the Sanitary Inspector of the inspection of buildings.

#### ENFIELD URBAN DISTRICT.

Medical Officer of Health, J. J. Ridge, M.D., B.S., B.A., B.Sc., &c.

Estimated population, 37,500.

Births, 1,086; Birth-rate, 28·9.

Deaths, 546; Death-rate, 14·56.

Deaths under 1 year, 167; Infantile mortality-rate, 154.

*Statistics.*—The deaths from the principal zymotic diseases numbered 138, equal to a rate of 3·7 per 1,000.

*Infectious Diseases Notification.*—The number of cases of infectious diseases reported during the year was 320, compared with 323 in the previous year, and 422 in the year before. 14 swabbings from suspicious sore-throats were submitted to bacteriological examination, and the true diphtheria bacillus found in 5.

*Isolation Hospital.*—The number of patients admitted to the Temporary Isolation Hospital was 174, of which 96 were from Enfield itself, 25 from Edmonton, 18 from Southgate, 17 from South Hornsey, 13 from Cheshunt, 3 from Friern Barnet, 1 from Wood Green, and 1 from Waltham Abbey. A contract has been sealed for the erection of a new Isolation Hospital at World's End, to contain 82 beds (for details see Part I).

*Water Supply.*—The new works at Ponder's End for the supply of water have been proceeding slowly. The Ches-hunt effluent, close by, requires to be enclosed in a water-tight channel. Of 14 samples of well-water examined, 8 were found to be unfit for domestic use, and other arrangements were made.

*Sewerage and Drainage.*—Considerable lengths of sewers and drains have been laid, and cesspools enabled to be abolished in Goat Lane. A much larger volume of sewage has to be dealt with at the sewage farm, which has been overtaxed for years past.

*Sanitary Work.*—A large amount of inspection and sanitary improvement has been carried out during the year.

#### FINCHLEY URBAN DISTRICT.

Medical Office of Health, H. Kenwood, M.B., D.P.H., F.C.S.

Estimated population, 20,064.

Births, 501 ; Birth-rate, 24·9.

Deaths, 205 ; Death-rate, 10·2.

Deaths under 1 year, 51 ; Infantile mortality-rate, 101·7.

*Statistics.*—The deaths are inclusive of 12 parishioners who died in public institutions without the District, and exclusive of 11 non-parishioners who died within the District, namely, 6 in the Woodside Home, and 5 in the Convent of the Good Shepherd. The number of deaths from the principal zymotic diseases was 34, equal to a rate of 1·69 per 1,000, compared with 1·28 in the previous year, the increase being due to measles.

*Infectious Diseases Notification.*—104 notification certificates of infectious sickness were received, as compared with 85 in 1896, 77 in 1895, and 171 in 1894. The infectious sickness rate was thus 5·1 per 1,000 of population, as compared with 4·5, 4·18, and 9·49 in the three previous years. The London rate was 10·2 for the year.

*Epidemics.*—A severe outbreak of measles necessitated the closure of two Board Schools and two Church Schools for several weeks in the summer.

*Isolation Hospital.*—The patients removed to hospital were either taken to the local Scarlet Fever Hospital, North Finchley, the Children's Hospital, Great Ormond Street, or the London Fever Hospital, Liverpool Road. 32 cases of scarlet fever (2 adults and 30 children) were admitted into the hospital during the year.

*Water Supply.*—Four samples of water were analysed, of which two were condemned.

*Sewage Disposal.*—The filter beds at the Sewage Disposal Works are being relaid in such a manner and of such material that they may be aerated and worked every alternate twelve hours, and experiments upon the bacterial treatment of the sewage have commenced.

*Sanitation Generally.*—The various premises in the District have been duly inspected, especial attention having been paid to places where pigs are kept.

*Laws and Bye-Laws.*—The following Adoptive Acts are in force in the District:—

The Infectious Diseases (Notification) Act, 1889.

„ „ (Prevention) Act, 1890.

The Public Health Amendment Act, 1890.

The following Bye-laws are in force in the District:—

The cleansing of footways, &c., removal of house-refuse, cleansing of earth-closets, privies, &c.

The prevention of nuisances arising from snow, filth, &c., and the keeping of animals so as to be injurious to health.

Common lodging-houses.

New streets and buildings.

Slaughter-houses.

Houses let in lodgings.

Offensive trades.

#### FRIERN BARNET URBAN DISTRICT.

The partial Report of this District extends from the 1st January to the 20th July, 1897, the date of the resignation of the late Medical Officer of Health.

A further partial Report was received on 5th July, 1898, extending from 20th July to 31st December, 1897, in which the sanitary work is complete for the year 1897, but not the vital statistics.

The newly-appointed Medical Officer of Health, Frank A. Spreat, M.R.C.S., D.P.H., states that the Birth-rate for the year was 27·2 per 1,000 of population, the Death-rate 12·4, the Infantile Mortality-rate 131 per 1,000 births, and the Zymotic Death-rate 2·7.

#### GREENFORD URBAN DISTRICT.

Medical Officer of Health, George Hope, D.P.H., L.R.C.P.

Estimated population, 773.

Births, 34 ; Birth-rate, 43·9.

Deaths, 8 ; Death-rate, 10·2.

Deaths under 1 year 2 ; Infantile mortality-rate, 58·8.

*Statistics.*—Two deaths of non-parishioners occurred in the District; these are excluded from the deaths. There were no deaths from the principal zymotic diseases.

*Infectious Diseases Notification.*—A case of erysipelas was the only infectious case notified during the year.

*Vaccination.*—16 children were successfully vaccinated.

*Sanitary Work.*—This is set out in Tables C (I), (II), (III), (IV).

#### HAMPTON URBAN DISTRICT.

Medical Officer of Health, Wentworth Tyndale, M.B.

Estimated population, 6,000.

Births, 163; Birth-rate, 27·16.

Deaths, 80; Death-rate, 13·3.

Deaths under 1 year, 26; Infantile mortality-rate, 159.

*Statistics.*—18 deaths occurred from the principal zymotic diseases, equal to a rate of 3·0 per 1,000, 13 of the deaths being due to diarrhœa in children under one year of age, which also raised the Infantile mortality-rate.

*Infectious Diseases Notification.*—17 cases of the scheduled infectious diseases were notified.

*Epidemics.*—Whooping cough, diarrhœa, and measles were prevalent during the year, the schools being closed for a time on account of the last-mentioned disease.

*Isolation Hospital.*—The Isolation Hospital is at Tolworth, Surbiton, Surrey. Three cases of scarlet fever, and two cases of typhoid fever were removed to hospital.

*Water Supply.*—The water of 17 wells was examined, and 9 found unfit for use, and water laid on to the premises. The Grand Junction Water Company serves the District.

*Drainage and Sewerage.*—The sewerage scheme for the District is nearly complete, “the dreadful business of emptying cesspools will be done away with.”

*Sanitation Generally.*—Some houses have been closed as unfit for habitation. The roads have been much disturbed by the progress of water, gas, and sewerage works. The smoke nuisances from the shafts of the Water Companies have been abated, also the nuisance produced in dry weather by the accumulation of the sand taken from the filter beds.

#### HAMPTON WICK URBAN DISTRICT.

Medical Officer of Health, Th. Günther, M.D.

Estimated population, 2,378.

Births, 44 ; Birth-rate, 18·45.

Deaths, 33 ; Death-rate, 13·84.

Deaths under 1 year, 2 ; Infantile mortality rate, 45.

*Statistics.*—Two of the 33 deaths were of persons found drowned. There were 5 deaths from the principal zymotic diseases, equal to a rate of 2·1 per 1,000.

*Infectious Diseases Notification.*—13 notifications were received, to which scarlatina contributed 5 and diphtheria 4 cases.

*Epidemics.*—Measles was prevalent and necessitated the closure of the public elementary schools.

*Isolation Hospital.*—There is no provision for the District, and attention is again drawn to this want.

*Sanitation.*—The routine work has been carried out, and, in addition, a systematic inspection of the District. The work accomplished is set out in the Tables.

#### HANWELL URBAN DISTRICT.

Medical Officer of Health, G. Hope, D.P.H., L.R.C.P., M.R.C.S.

Estimated population, 6,773 (including Central London District Schools and St. Joseph's Home).

Births, 227 ; Birth-rate, 33·5.

Deaths, 86 ; Death-rate, 12·6.

Deaths under 1 year, 29 ; Infantile mortality-rate, 127·7.

*Statistics.*—The Central London District Schools (population, 1,065 ; births, 0 ; deaths, 1) are included in the statistics. The number of deaths from the principal zymotic diseases was 15, equal to a rate of 2·2.

*Infectious Diseases Notification.*—115 cases of infectious diseases were notified during the year ; in the previous year the number was 89. Three scarlet fever cases and one of typhoid fever occurred at the Central London District Schools.

*Epidemics.*—Diarrhoea was very prevalent in the autumn. Scarlet fever was also more prevalent than in the previous year, but as there were no deaths from this cause the type was not virulent. Diphtheria was also more prevalent.

*Isolation Hospital.*—A site near the Sewage Farm has been approved by the Local Government Board for an infectious hospital, and plans have been drawn to provide two pavilions, one for 8 beds, and the other for 4 beds. The matter now only awaits the Local Government Board enquiry and sanction to raise a loan.

*Sanitary Work.*—The Tables C (I), (II), (III), (IV), “do not by any means show all that has been done in this District during the year.” Complaints are made of the distance of the mortuary from the Coroner’s Court, and that there is no water for washing purposes at the mortuary. The condition of the Brent has occupied serious attention during the year, Hanwell being situated at the lower end of the stream.

#### HARROW-ON-THE-HILL URBAN DISTRICT.

Medical Officer of Health, J. Fletcher Little, M.B., M.R.C.P.

Estimated population, 8,777.

Births, 196; Birth-rate, 22·3.

Deaths, 72; Death-rate, 8·03.

Deaths under 1 year, 14; Infantile mortality-rate, 71.

*Statistics.*—The “principal zymotic diseases” caused 5 deaths, equal to a rate of 0·57 per 1,000.

*Infectious Diseases Notification.*—During the year 36 cases of dangerous infectious diseases were certified; in the previous year the number was 60. The provision of bacteriological tests for doubtful cases of diphtheria, typhoid fever, &c., is recommended.

*Isolation Hospital.*—Eighteen cases of scarlet fever were admitted during the year, only one of which died. An observation ward is greatly needed for doubtful and other cases. It has been decided to provide a steam disinfecter which will be a valuable adjunct to the Hospital and to the District. District nurses are recommended for typhoid fever.

*Sanitation* — The West Street pond is to be filled up. The recreation ground at Roxeth will soon be opened to the public. The Council is advised to have the water of the Colne Valley Company examined chemically and bacteriologically from time to time. It is recommended to serve notices to provide proper flush-tanks to water-closets without water, and to those possessing flush-tanks of only two gallons capacity, to empty them twice on each occasion of use. The dairies, bake-houses, slaughter-houses and common lodging-houses were duly inspected. Fifty-six new dwelling-houses, 23 additions and alterations, and 9 other buildings were erected during the year.

#### HENDON URBAN DISTRICT.

Medical Officer of Health, F. W. Andrew, M.R.C.S., L.R.C.P.

Estimated population, 19,696 (excluding 64 of the 128 inmates of the Hendon Union Workhouse).

Births, 557; Birth-rate, 29·3 (excluding 26 of the 32 births in the Union).

Deaths, 284; Death-rate, 14·5 (excluding 76 of the 96 deaths in the Union).

Deaths under 1 year, 105; Infantile mortality-rate, 188·5.

*Statistics.* — The Workhouse accommodates Hendon, Harrow, Great and Little Stanmore, Edgware and Kingsbury, Willesden being now a separate parish. The following is quoted as the returns for the year :—

(a) Average number of inmates in Union for	
year .. .. .	128
(b) Average number of inmates chargeable	
to Hendon .. .. .	64
(c) Number of deaths in Union for year ..	96
(d) „ „ „ chargeable to Hendon	20
(e) Number of births in Union for year ..	32
(f) „ „ „ chargeable to Hendon	6

(In Table A, Part III, it has been necessary to include the whole of the workhouse, as the ages and causes of death of those to be excluded are not deducted, and are not available for deduction).

The number of deaths from the principal zymotic diseases was 52, equal to a rate of 2·6 per 1,000 of a population of 19,696.

*Infectious Disease Notification.* — The total number of cases of infectious disease known was 94, measles and whooping-cough no longer being notifiable.

*Epidemics.*—In the summer a serious epidemic of infantile diarrhoea prevailed, attributed to bad feeding and the hot weather.

*Isolation Hospital.*—23 patients were admitted during the year. A new ward and nurses' room has been furnished, and is ready to receive patients. Scarlet fever is the only disease admitted to Hospital. The Council is asked to make provision for cases of diphtheria.

*Water Supply.*—The Colne Valley and the West Middlesex Water Companies supply the District, the former giving a constant supply.

*Drainage and Sewerage.*—The Burnt Oak and Orange Hill sewerage is completed, the house-drains connected, cesspools abolished, and the stream-pollution stopped. The Bittacy Hill and Mill Hill sewerage is progressing.

*Sewage Disposal.*—"Additional filters will have to be provided, in order to cope with the increase of population draining to the works," and it has been decided to erect additional filters, covering a surface of 800 square yards, and to plough up 12 acres, of 19 acres recently purchased, for the treatment of the effluent. Biological filters are to be adopted.

*Refuse Removal.*—The Council is recommended to do the "dusting" work themselves. The consideration of erecting a "dust destructor" is suggested, when finances will permit.

*Sanitation Generally.*—The various premises have been periodically inspected. The house-to-house inspection of the District has been completed, and notices have been served and complied with.

#### HESTON AND ISLEWORTH URBAN DISTRICT.

Medical Officer of Health, H. M. Bullock, L.R.C.P.,  
M.R.C.S.

Estimated population, 28,765 (including all workhouse).

Births, 729 ; Birth-rate, 25·34.

Deaths, 320 ; Death-rate 13·55 (excluding 110 deaths of non-residents in Union Workhouse).

Deaths under 1 year, 96 ; Infantile mortality rate, 131·68.

*Statistics.*—(The whole population of the Union Workhouse is included in the estimated population of the District, but only part of the deaths is included, consequently the death-rate is really somewhat higher than it appears.) From the zymotic diseases there were 40 deaths, equal to a rate of 1·39 per 1,000.

*Infectious Diseases Notification.*—During the year, 184 cases of the scheduled infectious diseases were notified, and also 31 cases of measles (9 under 5 years, 22 over 5 years of age). The 184 include 9 cases of scarlatina, 1 of enteric fever, and 3 of erysipelas, all over 5 years of age, occurring in the workhouse.

*Epidemics.*—The District was free from epidemics during the year.

*Isolation Hospital.*—47 cases of scarlet fever were removed to the Isolation Hospital, at Dockwell Lane, Heston. The buildings of the new Isolation Hospital are fast approaching completion. The provision of a laboratory, with bacteriological equipment in connection with the hospital, is recommended.

*Water Supply.*—The waters of 7 wells were analysed, 2 were found polluted, and 2 suspicious, with the result that water was laid from the mains to 6 houses.

*Sanitation Generally.*—A more frequent and efficient removal of house refuse is recommended. 7 houses were represented under the Housing of the Working Classes Act, 5 are closed as unfit for human habitation, and 2 are being dealt with. A mortuary for Hounslow has been

erected. The backwater of the Canal at North Hyde is still, at times, in an insanitary condition, owing to manure unloaded from barges not being carted away. The condition of the main watercourse is much improved, the drains of adjoining premises being now connected to the sewers. Several roads and sewers have been made with advantage, but others remain to be done.

### HORNSEY URBAN DISTRICT.

Medical Officer of Health, Henry Clothier, M.D.

Estimated population, 65,130 (including 48 inmates of the workhouse outside the District).

Births, 1,337 ; Birth-rate, 20·53.

Deaths, 548 ; Death-rate, 8·41 (including 23 deaths of inmates of workhouse and 2 others outside the District, and excluding 5 deaths of non-residents in the District).

Deaths under 1 year, 138 ; Infantile mortality-rate, 103·2.

*Statistics.*—The principal zymotic diseases caused 67 deaths, equal to a rate of 1·3 per 1,000.

*Infectious Diseases Notification.*—426 cases of infectious diseases were reported during the year as compared with 709 in the previous year.

*Epidemics.*—Diarrhoea was prevalent in the summer, as in most other districts, and caused 29 deaths.

*Isolation Hospital.*—Of the 160 cases admitted to the Isolation Hospital, 142 were of scarlet fever, 15 of diphtheria, and 3 of typhoid fever.

*Water Supply.*—"It has been decided that the water supplied to the District by the New River Company shall be periodically examined chemically and bacteriologically when required." The Stroud Green area is now under constant supply, but the constant system requires further extension in the District.

*Drainage and Sewerage.*—The flushing of sewers is being more frequently carried out, and the ventilation is being improved by the erection of more shafts. 4,860 yards of surface-water sewers, and 2,680 yards of foul-water sewers, making a total of 7,540 yards, were laid.

*Disposal of Refuse.*—The 12 cells of the destructor at the dépôt at Hornsey, have burnt all the house refuse during the year, consisting of 14,267 tons in 11,260 loads.

*Other Sanitary Work.*—An Assistant Sanitary Inspector has been appointed, and a Clerk transferred to the Health Department. The work done is set out in the Tables.

#### SOUTHALL-NORWOOD URBAN DISTRICT.

Medical Officer of Health, J. D. Windle, M.B., L.R.C.P., M.R.C.S.

Estimated population, 7,913 (excluding population of London County Asylum, 2,167).

Births, 254; Birth-rate, 32·1.

Deaths, 106; Death-rate, 13·4 (excluding 149 deaths in the London County Asylum and including 16 outside the District).

Deaths under 1 year, 28; Infantile mortality-rate, 110·2.

*Statistics.*—The London County Asylum (population, 2,167; births, 0; deaths, 149) is entirely excluded from the statistics. The St. Marylebone Schools (inmates about 361) are entirely included as part of the District. In the Union Workhouse at Hillingdon, outside the District, 6 parishioners died, and in Uxbridge Joint Hospital at Hillingdon, 10 parishioners died, making 16 parishioners dying outside the District.

*Infectious Diseases Notification.*—152 cases of infectious disease were recorded, 18 of which occurred in the London County Asylum, namely, 9 typhoid fever, and 9 erysipelas. In the St. Marylebone Schools, 5 cases of enteric fever occurred.

*Epidemics.*—Diphtheria was prevalent in epidemic form, and the North Road Schools were closed in consequence.

*Isolation.*—All the notified cases of scarlet fever, and also (with the exception of 3) those of diphtheria were removed to the Joint Isolation Hospital. Infectious cases at the London County Asylum and at the St. Marylebone Schools are treated at the infirmaries of the institutions.

The question of providing a separate isolation hospital for the District is still under consideration. The purchase of the site at North Hyde has fallen through, the choice of one of three sites at Mount Pleasant has been offered. It is suggested that provision should be made for scarlet fever, diphtheria, typhoid fever, and smallpox. Permanent provision for 16 beds is recommended, in 2 wards of 4 beds each, and 2 wards of 2 beds each, and 2 observation wards of 2 beds each, separated from the

general ward block. Temporary addition to be provided by a concrete foundation for the rapid erection of an iron or wooden building, to hold 16 beds, in case of a sudden epidemic. For smallpox, it is suggested that an iron building of 2 wards, containing 4 beds each, might be erected near the sewage farm, or a concrete foundation laid for rapid erection when necessary.

The Council is recommended to purchase a steam disinfecting apparatus at once.

*Water Supply.*—The South - West Suburban Water Company supplies the District with a pure, potable water.

*Sewage Disposal.*—The filters and the farm and the works have received continuous attention. The trade refuse discharged from the margarine works, on account of the fatty matter contained, has, from time to time, clogged the filters, and an action is pending. New sludge-pressing machinery has been fixed.

*Refuse Removal.*—1,330 loads of refuse were removed, equal to about a load per house per annum. All houses are now supplied with galvanised iron dust-bins provided with covers. The necessity for a refuse destructor is foreshadowed.

*Sanitation Generally.*—A nuisance, from the burning of soft core at the dock at Yeading, in the Uxbridge Rural District, was suppressed. Other nuisances were abated, and the inspection of various premises carried out.

*Adoptive Acts in force in the District:—*

- (1) Infectious Diseases (Notification) Act, 1889.
- (2) „ „ (Prevention) „ 1890.
- (3) Public Health Amendment Act, 1890.

*The Bye-laws in force:—*

- (1) Cleansing of earth closets, privies, ashpits, &c.
- (2) Prevention of nuisances, &c.
- (3) Common lodging houses.
- (4) New streets and buildings.
- (5) Slaughter-houses.
- (6) Houses let in lodgings.

*Burial Grounds.*—Full particulars as to the two burial grounds, the Cemetery (about  $1\frac{3}{4}$  acres, Havelock Road, Southall Green, opened in 1883) and St. John's (about  $\frac{1}{2}$  acre, the Green, Southall, opened in 1860), are also stated in the Report.

## SOUTHGATE URBAN DISTRICT.

Medical Officer of Health, E. C. Roberts, M.R.C.S.

Estimated population, 13,000 (excluding the M.A.B. Northern Hospital, and the Islington Workhouse).

Births, 326; Birth-rate, 25·0.

Deaths, 158; Death-rate, 12·1.

Deaths under 1 year, 48; Infantile mortality-rate, 147.

*Statistics.*—The Northern Hospital (of the Metropolitan Asylums Board), at Winchmore Hill, and the Islington Workhouse, at Bowes, are excluded from the statistics. Number of deaths from the principal zymotic diseases was 32, equal to a rate of 2·46 per 1,000.

*Infectious Diseases Notification.*—97 cases of infectious disease were notified, as compared with 95 in the previous year.

*Epidemics.*—As in the other Districts, there were serious outbreaks of measles. Whooping-cough was also prevalent.

*Isolation Hospital.*—The Infectious Disease Hospital for the District has not much further advanced. At the Northern Hospital of the M.A.B., 4,523 cases of scarlet fever, and 760 cases of diphtheria were admitted, and 5 died of scarlet fever, 4 of diphtheria, 2 of enteric fever, and 1 (a nurse) of gastric ulcer.

*Sanitation.*—Plans and estimates have been made, the sanction of the Local Government Board obtained, and the Surveyor instructed to proceed with the erection of a public mortuary. The branch sewers are being re-constructed under the loan of £2,000; but the new sewer in Green Lanes has not yet been commenced, though much needed. New ventilating shafts have been erected, and flushing is systematically carried out. The storm-water sewers in High Street, Southgate, have been rendered more efficient. Pymmes Brook is very seriously polluted by sewage from house drains and other sources outside the District.

#### SOUTH HORNSEY URBAN DISTRICT.

Medical Officer of Health, T. S. H. Jackman, L.R.C.P.

Estimated population, 17,200.

Births, 418; Birth-rate, 24·3.

Deaths, 238; Death-rate, 13·8.

Deaths under 1 year, 47; Infantile mortality-rate, 112.

*Statistics.*—The number of deaths from the principal zymotic diseases was 29, equal to a rate of 1·68 per 1,000.

*Infectious Disease Notification.*—The number of cases notified during the year was 94, in the previous year the number was 127.

*Isolation Hospital.*—24 of the cases notified were removed to hospital. The works in connection with the erection of the Isolation Hospital are being proceeded with, and will now soon be completed.

*Sanitation.*—The sanitary work carried out is set out in the Tables C.

#### STAINES URBAN DISTRICT.

Medical Officer of Health, Albert Curtis, M.R.C.S.

Estimated population, 5,807 (including 495 on the Billet Estate now added to the District.)

Births, 177 ; Birth-rate, 30·4.

Deaths, 64 ; Death-rate, 11·02 (including 4 parishioners dying in the Workhouse at Stanwell.)

Deaths under 1 year, 19 ; Infantile mortality-rate, 107.

*Statistics.*—The Billet Estate, formerly part of Stanwell, in the Staines Rural District, is now included in the Staines Urban District. The Estate has a population of 495 persons. The area of the Staines Urban District is now 1,905 acres 2 roods of land, and 74 acres of water. The deaths from the principal zymotic diseases were 6 (all diarrhoea of children under 5 years), equal to a rate of 1·03 per 1,000.

*Infectious Disease Notification.*—The number of notifications were 25, and there were no deaths from the diseases notified.

*Isolation Hospital.*—There is no hospital accommodation for the isolation of infectious diseases.

*Sanitation.*—This work is set out in Tables C. The Billet Estate will now doubtless be taken into the Staines Urban District sewerage scheme.

#### SUNBURY URBAN DISTRICT.

Medical Officer of Health, C. Dwight Morris, L.R.C.P., M.R.C.S.

Estimated population, 4,500.

Births, 118 ; Birth-rate, 26·2.

Deaths, 65 ; Death-rate, 12·2.

Deaths under 1 year, 23 ; Infantile mortality rate, 194·9.

*Statistics.*—The number of deaths from the principal zymotic diseases was 11, equal to a rate of 2·44 per 1800.

*Infectious Diseases Notification.*—The number of cases notified was 24, being 9 less than in 1896.

*Isolation Hospital.*—There is no infectious hospital accommodation.

*Sanitation.*—There are many shallow wells in the District and these are under observation. The sewerage system for the District is proceeding satisfactorily, although the subsoil water has given trouble. Better

mortuary accommodation is required, and further cemetery accommodation is being acquired. The outfall works and sewage farm are nearly completed, and are regarded as a model type. The Great Western Railway have been urged to diminish the nuisance from the unloading of manure for the market gardens of the District.

#### TEDDINGTON URBAN DISTRICT.

Medical Officer of Health, Th. Günther, M.D.

Estimated population, 13,000.

Births, 294 ; Birth-rate, 22·6.

Deaths, 156 ; Death-rate, 12·00.

Deaths under 1 year, 42 ; Infantile mortality-rate, 143.

*Statistics.*—The number of deaths from the principal zymotic diseases was 27, equal to a rate of 2·08 per 1,000.

*Infectious Diseases Notification.*—During the year, 41 cases of infectious diseases were notified, as compared with 76 in 1896, 52 in 1895, 63 in 1894, 184 in 1893.

*Epidemics.*—At the beginning of the year, measles was epidemic, and in the spring two schools were temporarily closed on this account.

*Isolation Hospital.*—There is no hospital accommodation for infectious cases, and it is indicated that the difficulty of provision can be solved by combination with neighbouring Authorities.

*Water Supply.*—The Grand Junction Water Company supplies the District and the supply is satisfactory. Six well waters were analysed, one was found polluted and the well closed.

*Drainage and Sewerage.*—117 old houses and 129 new houses have been connected to the sewers. In several cases sewer manholes have been closed and ventilating shafts erected.

*Sewage Disposal.*—At the works the pressed sludge is now offered free of cost.

*Refuse Removal.*—House refuse is removed once a fortnight but there is a demand for more frequent removal.

*Sanitary Work Generally.*—Inspections in reference to infectious diseases and nuisances, as well as systematic inspections, were made. Certain roads are in an insanitary condition. Various premises have been periodically inspected. An unusually large number of plans of new buildings have been submitted for approval.

#### TOTTENHAM URBAN DISTRICT.

Medical Officer of Health, W. T. Watson, B.A., M.D., D.P.H.

Estimated population, 87,180.

Births, 2,643; Birth-rate, 30·3.

Deaths, 1,199; Death-rate, 13·6 (excluding 115 deaths in public institutions).

Deaths under 1 year, 430; Infantile mortality-rate, 162·8

*Statistics.*—The number of deaths from the principal zymotic diseases was 187 (see Table A), equal to a rate of 2·1 per 1,000, as compared with 2·5 in the previous year.

*Infectious Diseases Notification.*—During the year, 889 cases of infectious diseases were notified, as compared with 1,087 in the previous year. A case of smallpox was notified in February, the patient was removed to South Mimms Hospital, and made a rapid recovery.

*Epidemics.*—As in other Districts of the county, diarrhoea was prevalent in the summer.

*Disinfection.*—The steam disinfector and the two vans are working satisfactorily, and disinfection is carried out free of charge. It is now proposed to add a laundry for the washable articles.

*Sanitation.*—The condition of the Moselle Brook has been considerably improved, but there is still some pollution going on. The Board Schools have been systematically inspected, and insanitary conditions rectified, and in future they will be periodically inspected. An action was brought against the owners of some brick-fields, without success. It is recommended to erect a refuse destructor. During the year, plans were passed for 860 new houses and shops, and 47 other new buildings in the District, and 42 alterations and additions.

#### TWICKENHAM URBAN DISTRICT.

Medical Officer of Health, W. Marston Clark, M.R.C.S.,  
D.P.H.

Estimated population, 18,500.

Births, 495; Birth-rate, 29·19.

Deaths, 256; Death-rate, 13·8.

Deaths under 1 year, 82; Infantile mortality-rate, 166.

*Statistics.*—The 256 deaths include 15 at Whitton, 8 at St. John's Hospital, 1 at the Powder Mills, and 2 at the Military Quarters at Whitton. There were 5 uncertified deaths. The principal zymotic diseases caused 32 deaths, equal to a rate of 1·7 per 1,000.

*Infectious Diseases Notification.*—77 cases of the scheduled diseases were notified, as compared with 109 in the previous year.

*Epidemics.*—In the summer, infantile diarrhoea was prevalent and fatal. The schools in one District were closed towards the end of the year, on account of measles, but no deaths occurred from this disease.

*Isolation Hospital.*—20 cases of scarlet fever were admitted to the Cottage Hospital. The ambulance has been renovated. 3 of the typhoid cases were admitted to St. John's Hospital, and 1 to St. Thomas's.

*Water Supply.*—12 samples of well waters were analysed, and 4 were found unfit. In the latter cases the wells were closed, and water laid on from the main.

*Sanitation Generally.*—The periodical visits and other inspections were made. Plans for 308 houses were submitted and approved.

#### UXBRIDGE URBAN DISTRICT.

Medical Officer of Health, A. E. L. Charpentier, M.D.

Estimated population, 8,739.

Births, 227 ; Birth-rate, 26·0.

Deaths, 142 ; Death-rate, 16·2 (excluding 1 non-parishioner, and including 15 parishioners in the Work-house, and 8 in the Joint Hospital).

Deaths under one year, 34 ; Infant Mortality rate, 140.

*Statistics.*—The number of deaths excludes 1 non-parishioner dying in the District, and includes 15 parishioners dying in the Workhouse, and 8 at the Joint Hospital, both the latter institutions being outside the Urban and in the Rural District. The deaths from the principal zymotic diseases numbered 21, equal to a rate of 2·4 per 1,000.

*Infectious Diseases Notification.*—Seventy-six notifications of infectious diseases were received, as compared with 63 in the previous year.

*Epidemics.*—Forty-six notifications of diphtheria were received, as compared with 14 in the previous year, and whooping-cough was also prevalent.

*Isolation.*—Forty-nine cases were treated at the Joint Infectious Hospital at Hillingdon, Uxbridge Rural District.

*Water Supply.*—It is hoped that the two new wells can be satisfactorily connected with the pumping station.

*Sewerage.*—The buildings of the new works are now completed, and the new system will shortly be at work.

*Sanitation.*—It is recommended to consider as to the adoption of the Housing of the Working Classes Act, to build model dwellings, and also of the Baths and Wash-houses Act. It has been decided that it is advisable to provide a mortuary. There were 6 outbreaks of swine-fever in the District, and 7 cases of tuberculosis in cows, according to the Report of the Veterinary Inspector.

## WEALDSTONE URBAN DISTRICT.

Medical Officer of Health, G. H. Butler, L.R.C.P.,  
M.R.C.S.

Estimated population, 3,600.

Births, 88 ; Birth-rate, 24·4.

Deaths, 35 ; Death-rate, 9·7.

Deaths under 1 year, 11 ; Infantile mortality-rate, 125.

*Statistics.*—The principal zymotic diseases caused 5 deaths, equal to a rate of 1·4 per 1,000.

*Infectious Diseases Notification.*—During the year, 18 cases of infectious diseases were notified, compared with 26 in the previous year.

*Epidemics.*—Seven of the 18 infectious cases notified were caused by diphtheria, and whooping-cough caused 3 of the 5 deaths due to the principal zymotic diseases. Mumps and influenza were prevalent.

*Isolation Hospital.*—The provision of hospital accommodation for infectious diseases is still wanting.

*Sanitation.*—Arrangement has been made for the periodical chemical and bacteriological examination of the drinking water. To the sewers additional ventilating shafts are being erected, and flushing, at least every fortnight, is being carried out. At the sewage farm the precipitation tanks, filter-beds, and pumping machinery are being duplicated on account of the increase of population. Roads and streets are being improved and made up. A burial ground or cemetery is required for the District.

*Bye-laws* have been recently adopted for the regulation of slaughter-houses, and also Regulations under the Cow-sheds, Dairies, and Milkshops Order.

### WEMBLEY URBAN DISTRICT.

Medical Officer of Health, C. E. Goddard, L.R.C.P., M.R.C.S.

Estimated population, 4,480.

Births, 92; Birth-rate, 20·5.

Deaths, 44; Death-rate, 9·8.

Deaths under 1 year, 9; infantile mortality rate, 97·8.

*Statistics.*—The principal zymotic diseases caused 9 deaths, equal to a rate of 2·0 per 1,000.

*Infectious Diseases Notification.*—Seven cases of infectious disease were notified during the year, compared with 24 in the previous year.

*Isolation Hospital.*—Accommodation for infectious cases is provided at the Willesden Isolation Hospital upon payment, but it suggests that the District is increasing in population and will require its own accommodation.

*Sanitation.*—The Alperton Sewage Farm has been the cause of much trouble and anxiety, but the works now being executed will prove adequate for many years. A mortuary is seriously required, and more accommodation is necessary for disposal of the dead. The piggeries in the District are being improved

## WILLESDEN URBAN DISTRICT.

Medical Officer of Health, D. S. Skinner, M.D.

Estimated population, 92,979 (including 231 in the Workhouse at Hendon, and 143 in the County Lunatic Asylum at Wandsworth).

Births, 2,887; Birth-rate, 31·0 (including 22 in the Workhouse at Hendon).

Deaths, 1,343; Death-rate, 14·4 (including 55 in the Workhouse, 16 in the County Lunatic Asylum, and 111 in the Metropolis, and excluding 12 non-residents).

Deaths under 1 year, 444; Infantile mortality-rate, 154.

*Statistics.*—The parish of Willesden is now a separate District, for Poor Law purposes, from the Hendon Union, and a site for a new workhouse and infirmary has been purchased just south of the Grand Junction Canal, near Lower Place, in the southern portion of the Harlesden Ward. [In Table A cannot be included the proportion of Hendon Workhouse (population 231, births 22, deaths 55), of the Wandsworth Lunatic Asylum (population 143, births 0, deaths 16), and of Metropolitan institutions (deaths 111), nor excluded the 12 persons dying within the District but not belonging thereto, on account of the ages, &c., not being known.] The number of deaths from the principal zymotic diseases was 270 in the District and 4 outside, making 274, equal to a rate of 2·9 upon a population of 92,979. The 4 zymotic deaths outside the District were 3 from diphtheria (2 under and 1 over 5 years), and 1 under 5 years from diarrhœa.

*Infectious Diseases Notification.*—During the year, 956 cases of scheduled infectious cases were notified; the number was 815 in 1896, and 741 in 1895.

*Epidemics.*—Some schools in Church End Ward were closed on account of measles, and a school in Kilburn was closed on account of diphtheria. As in other Districts, diarrhoea was prevalent and fatal towards the end of the hot summer; 111 deaths of infants under 5 years of age occurred during the year, as compared with 68 in the previous year, from this cause.

*Isolation Hospital.*—The increase in the number of scarlet fever and diphtheria cases, which have swollen the number of notifications, is attributed to the fact that the population is rapidly increasing (about 6,000 a year), and the isolation accommodation has proved insufficient to check the spread of these diseases. No less than 320 scarlet fever cases and 132 diphtheria cases were admitted to the hospital, and “in October it was found necessary to occupy the farmhouse at Stonebridge Farm for diphtheria, and to build a temporary iron building for scarlet fever.” Plans are now under consideration for more permanent accommodation.

*Vaccination.*—

No. of Births.	Successfully vaccinated.	Insusceptible.	Dead, unvaccinated.	Postponed.	Removed to other Districts.	Gone away.	Not yet vaccinated.
2,750	1,778	12	268	27	12	244	409

*Water Supply.*—The constant supply of the West Middlesex Water Company requires to be extended to the

whole Parish, but especially to the South Kilburn area, as the supply there “has been inadequate, and, on days when laundry work is done by the residents, there is not sufficient for the water-closets, and they consequently are liable to become foul, and a great source of danger to health.”

*Sewage Disposal.*—At the Census of 1891, in the Brent Drainage District, there were 2,817 houses, with a population of 17,749 persons, and in the Metropolitan Drainage District there were 5,334 occupied houses with a population of 43,517 persons. In the middle of 1897, it is estimated that there are, in the Brent Drainage District, 5,290 occupied houses, with a population of 33,328 persons, and, in the Metropolitan Drainage District, 7,256 houses, with a population of 59,277 persons. Consequently, in the Brent area it has been necessary to increase the sewage farm to 90 acres, to treble the number of depositing tanks, and, by improved methods, to practically quintuple them, to add 13 more polarite filter-beds of an area of 2,600 square yards, as well as beds for intermittent downward filtration and irrigation.

*River Pollution.*—Although the River Brent has improved, the withholding of water by the Canal Company gives rise to “a great deal of anxiety.”

*Sanitation Generally.*—There are two open spaces in the District, namely, Queen’s Park and Roundwood Park, but a level playground for games is wanted by the growing children, and, if not permanently appropriated soon, the extension of building operations will leave no space to be appropriated. Plans were passed during the year for 1,126 new houses. The cowsheds are becoming less

numerous, to make way for new houses. A public slaughter-house is advocated. A refuse destructor is also recommended. A large amount of routine sanitary work was carried out.

### WOOD GREEN URBAN DISTRICT.

Medical Officer of Health, C. H. Conolly, M.R.C.S.

Estimated population, 30,500.

Births, 939; Birth-rate, 30·78.

Deaths, 384; Death-rate, 12·51 (excluding 1 non-resident, and including 4 residents dying outside the District).

Deaths under 1 year, 151; Infantile mortality-rate, 160.

*Statistics.*—The deaths include 3 occurring in the Tottenham Hospital, and 1 in the Edmonton Union Infirmary, and exclude 1 non-resident dying in the Cottage Hospital of the District. The principal zymotic diseases caused 85 deaths, equal to a rate of 2·79 per 1,000.

*Infectious Diseases Notification.*—274 cases of infectious diseases were notified during the year, as compared with 187 in the previous year.

Specimens are sent to the Clinical Research Association, in doubtful cases of certain infectious diseases, for diagnosis.

*Epidemics.*—183 cases of scarlet fever were notified, as against 84 in the previous year; the incidence was greatest at the date of the re-opening of the schools in September. Diphtheria was also more prevalent. As in other Districts, diarrhoea caused a largely increased number of deaths.

*Isolation.*—The joint proposition with Southgate as to Tile Kiln Lane has fallen through, and an alternative site for Wood Green alone has been obtained. The urgency of the need for isolation accommodation is shown by the largely increased number of notifications.

*Ambulance and Disinfection.*—The ambulance and disinfecting apparatus at Moat House were destroyed by fire. A new ambulance has been obtained, and a low-pressure steam disinfecter.

*Sanitation.*—Plans for 172 new dwelling houses, 46 alterations and additions, 8 workshops and factories, 1 public building, and 5 stables, were approved during the year. The sanitary work carried out appears in the Tables.

#### HENDON RURAL DISTRICT.

Medical Officer of Health, B. Campbell Gowan, L.R.C.P., M.R.C.S.

Estimated population, 7,755.

Births, 153; Birth-rate, 19·72.

Deaths, 77; Death-rate, 9·93.

Deaths under 1 year, 11; Infantile mortality-rate, 71·9

*Statistics.*—The principal zymotic diseases caused 10 deaths, equal to a rate of 1·29 per 1·000.

*Infectious Diseases Notification.*—49 notifications of the scheduled infectious diseases were received, as compared with 57 cases in the previous year.

*Isolation Hospital.*—There is no accommodation for the isolation of infectious diseases.

*Sanitation.*—The public water supply is above suspicion. An injunction was obtained by “the Attorney-General against the Hendon Rural District Council,” to restrain the pollution of the Edgware Brook. The Edgware and Little Stanmore Sewage Farm, the effluent of which flows into the Edgware Brook, is stated to be in good condition, and the Brook much improved of late years, and all the houses in Edgware and Little Stanmore are connected with the sewers. Extensions of sewerage in various parts are proposed. Fifty-eight new buildings were erected, and the cottage properties in the District have been materially improved.

#### STAINES RURAL DISTRICT.

Medical Officer of Health, C. Dwight Morris, L.R.C.P., M.R.C.S.

Estimated population, 19,270 (including 194 in the Workhouse).

Births, 561 ; Birth-rate, 29·1 (none in Workhouse).

Deaths, 301 ; Death-rate, 15·6 (including 32 in Workhouse).

Deaths under 1 year, 80 ; Infantile mortality-rate, 143.

*Statistics.*—In the Parish of Stanwell, the Billet Estate of 63 acres and 3 roods of land, with a population of 490 persons, has been transferred to the Staines Urban District, and now forms part of that District. The principal zymotic diseases caused 53 deaths, equal to a rate of 2·7 per 1,000.

*Infectious Diseases Notification.*—The number of cases notified was 128, as compared with 108 in the previous year.

*Sanitation.*—There has been great activity in building in several parishes, especially Ashford and Feltham, but there is carelessness in the construction of drains, which, unfortunately, cannot be controlled. The Staines Urban District Sewerage Works and the effluent, directly polluting the River Ash, which runs through the south-western part of the Rural District, caused complaints. The effluent has now been diverted on to the land and the stream is much improved. The water-logged condition of certain parts of Hanworth, notably the Newman Estate (Twickenham Road), has been cured by the unblocking of the relief drain of an old gravel pit. A spring that rises here and flows into the Thames, above the Water Companies intakes, was in danger of being contaminated by gipsies from Maidstone; their encampment was promptly dispersed. Considerable attention was directed to water supplies, mains being laid in various directions, polluted shallow wells being closed, and deep wells being cleansed and repaired. Proper infectious hospital accommodation and an ambulance are required. Summer diarrhoea was prevalent in August; there were 20 deaths from diarrhoea in children under 5 years of age. The filtering tanks in Harmondsworth and Cranford are working correctly. The Feltham and Ashford Schools were closed for a short time on account of measles. There were 7 cases of scarlet fever in the Welsh schools. Cranford is the only village in the District that has a drainage scheme. A more systematic inspection of cows is recommended. The condition of many cottages greatly requires improvement. The Public Health Water Act has helped in rapidly dealing with water supplies.

## SOUTH MIMMS RURAL DISTRICT.

Medical Officer of Health, W. Gruggen, L.R.C.P., D.P.H.

Estimated population, 2,548.

Births, 71 ; Birth-rate, 23·9.

Deaths, 29 ; Death-rate, 11·7.

Deaths under 1 year, 7 ; Infantile mortality-rate, 98.

*Statistics.*—The principal zymotic diseases caused 3 deaths, all from diarrhœa in children, equal to a rate of 1·1 per 1,000 living.

*Infectious Diseases Notification.*—Six cases of infectious diseases were notified, as compared with 34 in the previous year.

*Isolation Hospital.*—Attention is again called to the want of the provision of some kind of accommodation for the isolation of infectious cases.

*Sanitation.*—South Mimms and Potters Bar villages are supplied by the Barnet Water Company. No samples of water were taken. According to a Special Report made by the Medical Officer of Health, the water supply of Potters Bar was temporarily stopped and contaminated during the breakage and repair of a service pipe. The sanitary work done is set out in the Tables.

## UXBRIDGE RURAL DISTRICT.

Medical Officer of Health, Charles Roberts, M.R.C.S.

Estimated population, 15,108 (exclusive of 32 non-parishioners in Workhouse).

Births, 490 ; Birth-rate, 33·02.

Deaths, 228 ; Death-rate, 15·08 (exclusive of 34 non-parishioners).

Deaths under 1 year, 60 ; Infantile mortality-rate, 122·4.

*Statistics.*—The principal zymotic diseases caused 27 deaths, equal to a rate of 1·8 per 1,000.

*Infectious Diseases Notification.*—Notification of 145 cases of infectious diseases were received; in the previous year the number was 143.

*Isolation Hospital.*—During the year 260 patients were admitted to the Joint Isolation Hospital, as under:—

	Scarlatina.	Diphtheria.	Total.
Uxbridge Urban District. .. ..	17	32	49
Uxbridge Rural District. .. ..	75	15	90
Southall-Norwood Urban District ..	37	84	121
Totals ..	129	131	260

The Hospital is not large enough for its requirements, and Southall-Norwood District, which sent 121 out of the 260 cases, nearly one-half, should have its own Isolation Hospital.

*Water.*—Forty-two samples of water were analysed of which 10 were found unfit, and the wells closed.

*Drainage and Sewerage.*—A system of drainage for Cowley, Hillingdon East, West Drayton, and Yiewsley has been approved by the Local Government Board. The drainage of Hayes, Northwood, and Eastcote will require

schemes also. The new Uxbridge Urban Sewage Works are in an advanced stage; when completed the River Colne will no longer be polluted by the sewage of that town.

*Northholt*.—Water from the mains is now laid on to the dwellings in this village.

*Hillingdon East*.—Population, 2,463. Three separate cases of typhoid fever were imported into 3 different cottages, the first spread to 5 other persons in the same cottage, the second to 2 others, and the third to 3 other persons. The roads in the village, and on Hillingdon Heath, require to be made good, and properly drained.

*Yiewsley*.—Population, 2,717. The town is lighted by incandescent light. A prohibitory order was obtained against the deposit of soft core near the Para Rubber Works.

*Cowley*.—Three cases of scarlatina, and 3 of diphtheria were notified.

*West Drayton*.—A row of new cottages has been erected on the south side of the green in place of the old ones demolished.

*Ruislip*.—The village is fairly well drained.

*Harefield*.—The immunity from infectious disease is attributed to proper draining, the removal of refuse, the high situation of the village, and gravel soil.

*Ickenham*.—The River Pinn undoubtedly contains sewage.

[TABLES C. do not accompany the Report.]

### PART III.

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#### STATISTICAL TABLES.

*Note.*—The Statistical Notes at the commencement of the Summaries of many of the Districts must be read in conjunction with the Statistical Tables A and B, especially for explanations of the numbers referring to Public Institutions.



DISTRICTS.	Estimated Population, 1897.	Registered Births, 1897.	MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES.								MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																				
			At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and up- wards.	1	2	3	4	FEVERS.					10	11	12	13	14	15	16	17	18	19	20	21	
														Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.													
Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.																												TOTAL.
URBAN.																															
Acton† .. .. .	31,632	973	503	193	64	24	19	125	78	Under 5	..	..	28	..	2	..	..	..	..	..	2	..	80	..	..	..	..	..	..	..	..
Brentford .. .. .	14,806	576	231	83	34	6	12	62	34	5 upwds.	..	..	1	1	1	..	2	..	..	..	..	2	29	..	7	17	..	2	57	117	
Chiswick .. .. .	25,972	789	348	105	47	14	10	101	71	5 upwds.	..	3	8	4	..	2	..	..	..	..	1	..	30	..	21	16	17	4	50	114	
Ealing .. .. .	33,000	589	308	63	27	8	16	96	98	5 upwds.	..	2	3	..	..	..	..	..	..	..	2	19	..	6	20	2	..	91	196		
Edmonton*† (excluding Strand Workhouse and Schools, and major part of Ed- monton Workhouse)	33,966	1,099	542	184	86	31	14	146	81	5 upwds.	..	1	1	..	4	..	..	..	..	..	1	..	1	..	20	29	23	11	127	218	
Enfield .. .. .	37,500	1,086	546	167	82	45	17	132	103	5 upwds.	..	2	13	1	..	..	..	..	..	..	17	9	69	..	..	50	3	6	85	255	
Finchley*† .. .. .	20,064	501	205	51	31	7	6	57	53	5 upwds.	..	1	3	..	5	..	..	2	..	..	1	3	2	44	41	26	9	109	248		
Friern Barnet .. .. .	Report incomplete. M. O.H. resigned.									5 upwds.	..	3	7	..	..	..	..	..	..	..	31	12	52	..	1	42	1	5	95	249	
Greenford .. .. .	773	34	8	2	..	..	1	2	3	5 upwds.	..	3	14	..	4	..	..	..	..	..	7	1	4	..	38	30	31	11	154	297	
Hampton .. .. .	6,000	163	80	26	1	2	6	32	13	5 upwds.	..	..	1	..	1	..	..	..	..	..	10	4	16	1	..	10	..	2	37	82	
Hampton Wick .. .. .	2,378	44	33	2	3	2	3	9	14	5 upwds.	..	..	..	..	1	..	..	..	..	..	1	..	..	11	17	13	4	75	123		
Hanwell .. .. .	6,773	227	86	29	9	2	4	20	21	5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Harrow .. .. .	8,777	196	72	14	2	3	3	19	31	5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Hendon (including Hendon Union Workhouse)	19,696	583	360	105	36	8	16	102	93	5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Heston and Isleworth* (excluding 101 deaths in Workhouse)	28,765	729	390	96	32	15	20	97	130	5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Hornsey .. .. .	65,082	1,337	528	138	58	22	36	129	145	5 upwds.	..	..	6	..	..	..	..	..	..	..	2	4	19	1	..	15	..	2	77	126	
Southall - Norwood* (excluding L.C. Asylum)	7,913	254	90	28	13	3	7	13	26	5 upwds.	..	..	3	..	1	..	..	..	..	..	..	2	..	46	33	24	11	142	264		
Southgate (excluding N. Hosp. of M.A.B. and Islington Workhouse Infirmary)	13,000	326	158	48	20	5	5	46	34	5 upwds.	..	..	5	3	..	..	..	..	..	..	6	8	29	..	2	31	4	3	105	196	
South Hornsey† .. .. .	17,200	418	238	47	..	..	..	..	..	5 upwds.	..	2	11	..	1	..	..	..	..	..	1	1	1	41	69	52	7	145	332		
Staines† .. .. .	5,807	177	64	19	3	1	2	21	18	5 upwds.	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	1	..	..	14	21	
Sunbury .. .. .	4,500	118	65	23	6	5	6	14	11	5 upwds.	..	..	1	..	..	..	..	..	..	..	1	..	..	3	3	9	2	26	43		
Teddington .. .. .	13,000	294	156	42	26	8	6	41	33	5 upwds.	..	..	2	..	1	..	..	..	..	..	4	3	..	..	3	..	..	1	16	29	
Tottenham* .. .. .	87,180	2,643	1,199	430	196	56	35	279	203	5 upwds.	..	..	1	..	..	..	..	..	..	..	10	6	10	..	2	10	..	..	27	66	
Twickenham .. .. .	18,500	495	256	82	33	4	8	71	58	5 upwds.	..	8	11	3	..	..	..	..	..	..	1	..	..	2	8	14	7	4	50	90	
Uxbridge*† .. .. .	8,739	227	143	34	19	5	6	45	34	5 upwds.	..	3	12	1	..	8	..	..	4	..	11	29	89	1	9	156	4	9	330	663	
Wealdstone .. .. .	3,500	88	35	11	4	1	..	13	6	5 upwds.	..	..	4	2	..	2	..	..	..	..	..	2	2	70	70	61	15	278	535		
Wembley .. .. .	4,480	92	44	9	4	1	1	14	15	5 upwds.	..	..	..	..	..	..	..	..	..	..	1	..	..	3	11	..	1	66	115		
Willesden (proportion in Workhouse, Asylums, etc., not included)	92,605	2,865	1,173	444	160	63	37	302	167	5 upwds.	..	..	..	..	..	..	..	..	..	..	..	1	1	12	14	17	4	89	141		
Wood Green*† .. .. .	30,500	939	384	151	37	12	18	81	85	5 upwds.	..	4	6	..	1	..	..	..	1	..	..	7	3	1	11	17	12	7	72	142	
RURAL.																															
Hendon .. .. .	7,755	153	77	11	9	4	4	22	27	Under 5	..	..	3	..	..	..	..	..	..	..	..	2	1	..	..	2	..	..	12	20	
Staines† .. .. .	19,270	561	301	80	40	15	14	74	78	5 upwds.	..	1	1	..	1	..	..	..	..	..	..	1	..	3	10	4	5	31	57		
South Mimms .. .. .	2,548	71	29	7	4	..	1	8	9	5 upwds.	..	..	2	..	..	..	..	..	..	2	..	7	22	20	3	24	23	18	15	163	301
Uxbridge* .. .. .	15,108	490	228	60	22	13	8	70	55	5 upwds.	..	..	..	..	..	..	..	..	..	..	..	3	..	..	3	1	..	1	6	11	
										5 upwds.	..	1	4	..	2	..	..	..	..	..	1	1	17	1	5	13	..	1	9	18	
										5 upwds.	..	..	..	..	..	..	..	..	..	..	..	1	1	14	11	..	5	85	82	146	



**B** *TABLE of POPULATION, BIRTHS, and of NEW CASES of INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officers of Health, during the Year 1897, in the Districts of the COUNTY of MIDDLESEX; classified according to DISEASES, AGES, and LOCALITIES.*

DISTRICTS.	POPULATION AT ALL AGES, INCLUDING PUBLIC INSTITUTIONS.		Registered Births.	Aged under 5 or over 5.	NEW CASES OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.											NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITALS.										
	Census 1891.	Estimated to middle of 1897.			1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11
					Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.	Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	FEVERS.					Cholera.	Erysipelas.
									Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.							Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.		
URBAN.																										
Acton .. .. .	?	29,454	973	{ Under 5	..	93	89	4	..	10	..	..	..	..	25											
Brentford .. .. .	13,726	14,806	576	{ 5 upwds.	..	62	2	2	..	..	..	..	..	..	..	..	55									
Chiswick .. .. .	21,965	25,972	789	{ Under 5	..	83	8	..	1	6	..	..	2	..	15	..	74	..	..	1	1					
Ealing .. .. .	23,965	33,000	589	{ 5 upwds.	..	23	14	3	..	..	2	..	..	..	2	..	3									
Edmonton (including Strand Workhouse and Schools and Edmonton Workhouse) }	25,380	35,819	1,139	{ Under 5	..	49	29	..	..	15	2	..	..	..	37	..	17	2								
				{ 5 upwds.	..	32	9	4	..	3	..	..	..	7	..	43	25	..	..	7	..	..	..	..	3	
Enfield .. .. .	?	37,500	1,086	{ Under 5	..	46	24	..	..	11	..	..	..	..	20	..	26	..	..	5						
Finchley .. .. .	6,410	20,064	501	{ Under 5	..	45	37	..	..	1	..	..	..	..	3	..	10	2								
				{ 5 upwds.	..	103	54	..	..	27	1	..	5	..	47	..	96	..	..	..	10					
Friern Barnet .. .. .	Report incomplete. M.O. H. resigned			{ Under 5	..	235	103	1	..	33	..	..	..	..	33	..	16	3	..	1						
Greenford .. .. .	660	773	34	{ Under 5	..	17	6	..	..	1	..	..	..	..	1	..	10	2								
				{ 5 upwds.	..	37	14	..	..	12	..	..	2	..	14	..	16	3	..	..	1					
Hampton .. .. .	5,800	6,000	163	{ Under 5	..	..	..	..	..	..	..	..	..	..	1	..	2									
Hampton Wick .. .. .	2,378	2,378	44	{ Under 5	..	2	..	..	..	..	..	..	..	..	6	..	1	..	..	2						
				{ 5 upwds.	..	3	1	..	..	4	..	..	1	..	6	..	1	..	..	..	2					
Hanwell .. .. .	6,139	6,773	227	{ Under 5	..	1	1	..	..	..	..	..	..	..	4	..	13									
				{ 5 upwds.	..	4	3	..	..	..	..	..	..	4	..	13										
Harrow (Census 1896, 8,373) .. .. .	5,725	8,777	196	{ Under 5	..	77	24	..	..	6	..	..	1	..	7	..	27	4	..	1						
				{ 5 upwds.	..	20	6	..	..	6	..	..	..	2	..	17	5	1	..	..	1					
Hendon .. .. .	15,843	19,696	583	{ Under 5	..	1	1	..	..	..	..	..	..	..	2	..	17	1	..	..						
				{ 5 upwds.	..	6	6	..	..	4	..	..	..	1	..	5										
Heston and Isleworth .. .. .	26,271	28,765	729	{ Under 5	..	29	21	..	..	11	..	..	2	..	14	..	18									
				{ 5 upwds.	..	16	12	..	..	..	..	..	2	..	25	..	34									
Hornsey .. .. .	44,205	65,082	1,337	{ Under 5	..	58	28	..	..	10	..	..	2	2	25	..	27	4	..	1						
				{ 5 upwds.	..	264	87	3	..	31	..	..	2	..	39	..	115	11	..	..	2					
Southall-Norwood .. .. .	7,225	10,083	254	{ Under 5	..	39	88	..	..	15	..	..	..	..	9	..	39	85	..	6						
				{ 5 upwds.	..	63	6	..	..	11	..	..	6	..	11	..	18	..	..	..	1					
Southgate (excluding N. Hospital of M.A.B.)	10,630	13,000	326	{ Under 5	..	48	25	2	..	7	..	..	..	..	12	..	1	..	..							
South Hornsey .. .. .	?	17,200	418	{ Under 5	..	12	1	..	..	5	..	..	..	..	7	..	..	..	..							
Staines .. .. .	5,060	5,807	177	{ Under 5	..	6	9	..	..	3	..	..	..	..	6	..	..	..	..							
Sunbury .. .. .	4,099	4,500	118	{ Under 5	..	8	1	..	..	..	..	..	..	..	6	..	..	..	..							
Teddington .. .. .	10,025	13,000	294	{ Under 5	..	14	10	..	..	3	..	..	2	..	3	..	44	11	1	..	3					
Tottenham .. .. .	71,343	87,180	2,643	{ Under 5	..	145	58	6	..	8	..	..	..	..	7	..	136	11	..	38						
Twickenham .. .. .	16,026	18,500	495	{ Under 5	1	347	117	..	..	114	2	..	5	..	79	1	20	..	..	4						
				{ 5 upwds.	..	34	17	3	..	11	..	..	4	1	7	..	20	..	..	..	4					
Uxbridge .. .. .	?	8,739	227	{ Under 5	..	17	46	..	..	3	..	..	1	..	9	..	1	..	..							
Wealdstone .. .. .	3,141	3,500	88	{ Under 5	..	..	3	..	..	1	..	..	..	..	1	..	..	..	..							
				{ 5 upwds.	..	1	4	..	..	1	..	..	..	7	..	..	..	7	..	..	..					
Wembley .. .. .	3,200	4,480	92	{ Under 5	..	2	..	..	..	..	..	..	..	..	5	..	1	..	..							
Willesden .. .. .	61,266	92,605	2,865	{ Under 5	..	154	113	3	..	3	..	..	..	1	9	..	96	56	..	1						
				{ 5 upwds.	1	356	157	2	..	49	1	..	9	1	98	..	224	76	..	..	15	..	..	..	1	
Wood Green .. .. .	25,831	30,500	939	{ Under 5	..	39	17	..	..	1	..	..	..	..	1	..	2	..	..							
				{ Under 5	1	144	29	..	..	17	..	..	2	..	23	..	55	13	..							
				{ 5 upwds.	..	80	24	..	..	23	..	..	..	18	..	20	4	..	..							
RURAL.																										
Hendon .. .. .	?	7,755	153	{ Under 5	..	3	10	..	..	..	..	..	..	..	1	..										
Strines .. .. .	?	19,270	651	{ Under 5	..	21	9	..	..	4	..	..	..	..	1	..										
				{ 5 upwds.	..	74	11	..	..	16	..	..	..	27	..											
South Mimms .. .. .	2,419	2,548	71	{ Under 5	..	1	2	..	..	..	..	..	..	..	3	..										
Uxbridge .. .. .	14,369	15,108	490	{ Under 5	..	..	..	..	..	..	..	..	..	..	3	..										
				{ 5 upwds.	..	80	24	..	..	23	..	..	..	18	..	20	4	..	..							



## COUNTY OF MIDDLESEX.—SANITARY WORK, 1897.

Sanitary Districts.	Inspections.						Notices.					Dwelling Houses.				Houses let in separate Dwellings or Lodgings.			Common Lodging Houses.			Canal Boats used as Dwellings.			Movable Dwellings, Caravans, Tents, &c.					
NOTE.—Asterisks or other signs appearing opposite a District, signify that those columns of the District are taken together.  0 = none. .. = no return.	Complaints Received.	Cases of Infectious Disease Notified.	Number of Premises periodically Inspected.	Houses Inspected from House-to-House.	Total Number of Houses, Premises, &c., Inspected.	Total Number of Re-inspections after Order or Notice.	Total Number of Inspections and Re-inspections.	Letters Written.	Cautionary Notices Given.	Statutory Orders Issued.	Summonses Served.	Convictions Obtained.	Houses, Premises, &c., Cleansed, Repaired, &c.	Closed as Unfit for Habitation.	Re-opened after Repairs, Alterations, &c.	Demolished.	Illegal Underground Dwellings Vacated.	Number Registered under Bye-laws.	Periodical Frequency or Number of Inspections.	Number of Contraventions.	Number Registered under Bye-laws.	Periodical Frequency or Number of Inspections.	Number of Contraventions.	Number Registered under the Acts.	Periodical Frequency or Number of Inspections.	Number of Contraventions of Regulations.	Number Observed during the Year.	Number of Nuisances therefrom Abated.	Number Removed from District.	
URBAN.																														
Acton .. .. .	135	..	..	..	..	..	..	*	317*	..	..	..	40																	
Brentford .. .. .	22	..	..	380	1,065	575	..	..	349	45	5	5	80	3	3	..	..	0	..	..	7	102	..	242	332	48				
Chiswick .. .. .	{ 279 117 }	..	..	..	2,254	..	..	..	659	..	14	..	63	2																
Ealing .. .. .	..	..	..	..	575	..	..	..	..	244	..	..	35																	
Edmonton .. .. .	134	323	194	948	2,632	3,280	5,912	854	445	101	2	2	170	8	39	..	..	0	..	..	1	58	..	..	67	5	811	..	269	
Enfield .. .. .	71	320	201	..	1,468	5,581	8,455	1,705	950	138	1	1	102	2	..	..	..	..	..	..	0		..	..						
Finebley .. .. .	57	104	176	265	564	782	1,346	297	68	635	19	16	106	0	0	0	0	0	0	0	0	0	0	..	..	..	0	0	0	
Friern Barnet .. .. .	16	353	20	513	533	225	785	..	75	79	..	..	23	..	..	1	..	..	..	..	..	..	..	..	..	..	..	8	8	
Greenford .. .. .	2	1	18	42	89	89	178	66	78	..	..	..	24	..	..	..	..	0	..	..	0	..	..	..	..	..	..	0		
Hampton .. .. .	71	27	20	127	489	2,878	3,367	107	345	60	9	9	70	5	0	0	0	0	0	0	0	0	0	..	3	0	2	0	2	
Hampton Wick .. .. .	27	..	..	..	125	..	..	..	..	36																				
Hanwell .. .. .	..	115	..	..	..	..	..	72*	*	144	..	..	..	..	..	..	0	0	..	..	0	..	..	..	..	..	..	0		
Harrow .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Hendon .. .. .	112	94	85	505	721	920	1,431	45	104	314	12	10	81	3	..	..	..	90	qrtrly	..	0	..	..	..	..	..	83	..	83	
Heston and Isleworth .. .. .	101	184	230	906	9,335	2,255	11,591	2,568*	*	51	4	4	{ 6 135 }	7	1	5	0	3	50	4	2	48	0	..	278	12 { gang 1 }	1	1	1	
Hornsey .. .. .	203	426	133	120	1,300	4,303	5,600	many	438	98	1	1	142	..	..	..	..	..	..	..	..	..	..	..	..	..	3	1	3	
Southall-Norwood .. .. .	114	152	..	..	550	300	850	90	76	29	4	4	2	..	..	..	..	0	0	0	0	0	0	..	132	16	14	6	14	
Southgate .. .. .	..	306	183	141	675	1,050	1,720	286	172	30	1	..	117	10	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	
South Hornsey .. .. .	52	94	..	..	625	1,200	..	750	60	199	..	..	57	0																
Staines .. .. .	..	25	..	..	..	..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	0									
Sunbury .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Teddington .. .. .	43	..	..	..	1,300	..	..	65	18	8	..	..	37																	
Tottenham .. .. .	718	998	..	1,352	3,035	14,695	17,710	1,810	3,659	1,081	..	..	446	..	..	..	..	..	..	..	6	362	..	..	..	..	96	..	38	
Twickenham .. .. .	38	77	109	*	1,100*	660	1,760	160	50	266	3	2	30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	
Uxbridge .. .. .	12	78	..	1,460	..	..	..	..	..	155	..	..	10	..	..	..	..	8	114	..	4	..	..	13						
Wealdstone .. .. .	..	18	..	..	..	..	..	582	23*	*	4	2																		
Wembley .. .. .	..	..	..	..	{ 90 317 }	..	..	..	18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53				
Willesden .. .. .	570	956	402	3,070	4,998	1,360	6,358	975	625	279	8	6	59	0	0	0	9	320	..	..	4	nthly.	3	0	weekly	37	47*	*	*	
Wood Green .. .. .	164	271	85	417	938	2,400	3,743	672	255	248	..	2	116	6	..	..	..	0	..	..	..	..	..	..	..	..	26	..	96	
RURAL.																														
Hendon .. .. .	..	53	..	..	..	..	..	139	18	4	..	..	18					0	..	..	0	..	..	0	..	..	32	32	32	
Staines .. .. .	40	128	..	..	..	..	837	250	120	102	2	0	15	..	..	..	..	0	..	..	0	..	..	0	..	..				
South Mimms .. .. .	..	..	..	..	121	..	..	..	..	..	..	..	1																	
Uxbridge .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..																	



Sanitary Districts.	Schools.			Workshops and Work-places.			Laundries.			Bakehouses.			Slaughter-houses.			Cow-sheds.			Dairies and Milk-shops.			Unsound Food.		Adulterated Food.		Offensive trades.			Mortuaries.		
	Number in District.	Periodical Frequency or Number of Inspections.	Number found defective.	Number in District.	Periodical Frequency or Number of Inspections.	Contraventions of Factory Acts.	Number in District.	Periodical Frequency or Number of Inspections.	Contraventions of Factory Acts.	Number in District.	Periodical Frequency or Number of Inspections.	Contraventions of Factory Acts.	Number on Register.	Periodical Frequency or Number of Inspections.	Contraventions of Bye-laws.	Number on Register.	Periodical Frequency or Number of Inspections.	Contraventions of Bye-laws.	Number on Register.	Periodical Frequency or Number of Inspections.	Contraventions of Bye-laws.	Animals seized.	Articles or parcels seized.	Samples taken.	Found adulterated.	Number of premises in District.	Periodical Frequency or Number of Inspections.	Contraventions of Bye-laws.	Accommodation.	Number of bodies received.	
NOTE.—Asterisks or other signs appearing opposite a District, signify that those columns of the District are taken together.																															
0 = none. .. = no return.																															
URBAN.																															
Acton .. .. .	..	25	..	..	..	..	..	..	..	..	26	..	..	140	..	..	95*	..	..	*	..	..	19	..	..	..	..	..	..	..	1
Brentford .. .. .	15	..	..	12	..	..	7	..	..	22	freqt.	..	8	freqt.	..	*	..	..	23*	freqt.	..	..	1	..	..	..	..	..	..	..	1
Chiswick .. .. .	..	..	..	..	..	..	41	..	..	18	rgly.	..	9	rgly.	..	*	..	..	36*	rgly.	..	..	..	..	..	..	..	..	..	..	..
Ealing .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	273	..	..	295	..	..	{ 351 253	..	..	60	..	..	..	..	..	..	..	..
Edmonton .. .. .	14	23	2	12	24	1	9	20	2	21	38	3	7	134	2	12	39	2	65	77	3	..	60	..	..	..	..	..	1	6	
Enfield .. .. .	23	50	7	51	51	5	11	11	1	33	93	18	15	45	4	37	67	19	28	41	4	..	..	..	..	0	..	..	2	..	
Finchley .. .. .	23	3	2	0	0	0	11	3	4	15	4	0	12	4	0	8	4	1	8	4	0	0	0	0	0	0	0	0	{ mtrtry. 1 }	6	..
Friern Barnet .. .. .	6	24	..	1	4	..	4	12	..	5	20	..	2	8	..	6	24	..	6	12	..	..	..	..	..	..	..	..	0	0	
Greenford .. .. .	1	5	1	0	0	0	1	4	..	0	0	0	0	0	0	..	33*	..	*	..	..	0	0	0	0	1	6	1	0	0	
Hampton .. .. .	7	nthly.	6	..	..	..	..	..	..	5	hf.-yrly.	3	5	hf.-yrly.	3	5	hf.-yrly.	4	3	hf.-yrly.	0	0	0	..	..	1	..	..	2	7	
Hampton Wick .. .. .	3	freqt.	..	7	freqt.	..	7	freqt.	..	3	qrtrly.	..	2	qrtrly.	..	2	freqt.	..	2	qrtrly.	..	..	..	..	..	..	..	..	..	2	
Hanwell .. .. .	3																														
Harrow .. .. .																															
Hendon.. .. .	10	frqtlly.	..	..	..	..	60	frqtlly.	..	11	frqtlly.	..	10	qrtrly.	..	20	qrtrly.	..	19	hf.-yrly.	..	..	..	..	..	..	..	..	1	24	
Heston and Isleworth.. .. .	40	92	2	37	173	0	14	65	0	36	230	2	19	228	6	22	326	3	37	432	0	0	19	0	0	0	0	0	0	0	0
Hornsey .. .. .	12	nthly.	1	..	..	..	..	..	..	30	qrtrly.	..	10	ftngtly.	..	8	nthly.	..	37	qrtrly.	..	..	..	..	..	..	..	..	6	30	
Southall-Norwood .. .. .	{ public 6 }	{ freqt. 6 }	0	10	hf.-yrly.	..	..	0	..	8	hf.-yrly.	..	7	hf.-yrly.	..	8	hf.-yrly.	..	7	often	..	..	1	23	2	0	0	0	ample.	0	0
Southgate .. .. .	6	freqt.	..	..	..	..	..	..	..	11	freqt.	..	7	freqt.	..	19	freqt.	..	17	freqt.	..	..	..	..	..	..	..	..	0	0	
South Hornsey .. .. .	8	..	..	11	..	..	9	..	..	10	..	..	4	..	..	2	..	..	15	..	..	..	..	..	..	..	..	..	15		
Staines .. .. .	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1			
Sulbury .. .. .	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	8	..	..	8	..	..	..	..	..	..	..	..	..			
Teddington .. .. .	3	14	..	..	..	..	..	..	..	13	26	..	6	30	2	9	36	3	17	41	..	..	16	..	..	..	..	5	111		
Tottenham .. .. .	91	..	..	37	192	10	48	172	1	63	580	28	17	486	..	27	320	..	186	750	..	..	16	..	..	..	..	..	..	..	
Twickenham .. .. .	15	occasnl.	0	24	occasnl.	1	12	hf.-yrly.	0	17	hf.-yrly.	0	12	frqtlly.	3	10	frqtlly.	0	19	frqtlly.	0	0	0	0	0	0	0	0	4	7	
Uxbridge .. .. .	7	4	..	..	..	..	..	..	..	7	..	..	8	32	..	8	..	..	5	..	..	..	..	..	2	4	..	0			
Wealdstone .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	2	3	..	5	3	..	9	3	..	..	..	..	..	..	..	0			
Wembley .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	*	..	..	47*	..	..	..	..	..	..	..	..	..			
Willesden .. .. .	24	yrly.	3	49	yrly.	32	173	yrly.	118	50	yrly.	21	9	qrtrly.	3	10	yearly	5	76	yrly.	12	0	8	..	..	0	0	0	4	0 infectious	
Wood Green .. .. .	..	..	..	20	74	..	22	71	5	15	31	..	5	113	..	7	71	..	36	99	..	..	3	..	..	..	..	16 3	33 general 28		
RURAL.																															
Hendon.. .. .																															
Staines .. .. .	15	occasnl.	..	..	..	..	..	..	..	16	oceasly.	..	0	..	..	..	hf.-yrly.	..	..	hf.-yrly.	..	..	0	0							
South Mimms .. .. .	2*	*	..	..	..	..	..	..	..	4*	*	..	2*	*	..																
Uxbridge .. .. .																															



### C (III).

## COUNTY OF MIDDLESEX.—SANITARY WORK, 1897.

[illegible]



Sanitary Districts.	Disinfection.			Dust.					Dampness.								Sundry Nuisances Abated.							Contagious Diseases of Animals.			Infant Life Protection Act.		
	Rooms fumigated.	Rooms stripped and cleansed.	Articles disinfected or destroyed.	Dust-bins repaired.	New bins provided.	Movable receptacles substituted for fixed.	Periodical frequency of dust removal.	Number of complaints of non-removal received.	Roofs repaired, &c.	Guttering and rain-pipes repaired, &c.	Gardens, Areas, &c., levelled and drained.	Yards paved and drained.	Surface adjoining houses paved.	Dry areas provided.	Ventilation below floor provided.	Basements rendered impervious.	Overcrowding.	Smoke.	Accumulations of refuse.	Foul ditches, ponds, &c., and stagnant water.	Foul pigs and other animals.	Other nuisances.	Outbreaks.	Animals infected.	Animals destroyed.	Number of licensed premises.	Number of children.	Number of deaths.	
<div>NOTE.—Asterisks or other signs appearing opposite a District signify that those columns of the District are taken together.</div> <div>0 = none. .. = no return.</div>																													
URBAN.																													
Acton .. .. .	146	..	Lots 110	..	82	..	..	..	12	40	..	..	..	..	..	..	24	4	22	6	14	91							
Brentford .. .	..	..	..	15	38	..	Weekly	..	66	34	..	5	..	..	4	..	8	..	48	..	8								
Chiswick .. .	14	..	..	12	189	..	..	..	..	..	..	..	..	..	..	..	20	..	47	..	16								
Ealing .. .	104	..	..	..	66	..	..	..	12	..	..	..	..	..	..	..	3												
Edmonton .. .	241	168	2,025	11	305	..	{ Weekly and fortnightly }	50	153	51	..	115	..	..	9	1	11	3	23	9	..	311	..	..	..	5	19	6	
Enfield .. .	190	159	3,785	11	69	..																							Weekly
Finchley .. .	60	20	30	18	53	10	Weekly	32	48	20	8	8	6	0	7	0	17	2	6	3	12	56	0	0	0	0	0	0	
Friern Barnet ..	35	3	..	2	19	14	34	22	21	15	..	19	17	..	6	..	2	..	10	..	3		0	0	0	0	0	0	
Greenford .. .	0	0	0	0	0	0	..	0	6	6	12	12	..	..	..	..	6	..	31	28	7	..	0	0	0	0	0	0	
Hampton .. .	18	48	0	2	118*	*	Weekly	3	26	57	2	11	..	..	4	..	2	1	48	12	12	40	1	9	9	0	0	0	
Hampton Wick ..	8	..	..	..	9	..	fortnightly	17	3	2	..	..	..	..	..	..	..	..	10	..	2	4							
Hanwell .. .	51	51	..	..	..	..	Weekly	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2		
Harrow .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Hendon .. .	78	15	Lots	40	61	80	Weekly	40	25	3	..	..	..	..	..	2	4	1	40	19	10	50	1	30	15				
Heston and Isleworth ..	258	15	548	0	104	0	..	38	15	12	6	22	2	0	6	4	16	6	1,731	13	20	34	0	..	..	1	3	1	
Hornsey .. .	441	250	5,230	10	41	4	Weekly	114	29	30	..	64	7	2	40	5	4	3	4	3	18	52	..	..	..	0	0	0	
Southall-Norwood ..	60	..	..	..	..	..	Weekly	..	1	2	..	11	..	..	2	..	1	..	25	5	5	8	..	..	..	0	0	0	
Southgate .. .	86	73	30	21	82	..	Weekly	30	54	32	3	96	..	3	53	2	3	..	10	3	2	3							
South Hornsey ..	103	..	40	..	54	..	..	..	15	20	..	28	..	..	3	..	6	2	12	..	3								
Staines .. .	..	7	..	..	..	..	Weekly	..	..	..	..	..	..	..	..	..	1	..	3	1									
Sunbury .. .	..	..	..	..	..	..	Weekly	..	..	..	..	..	..	..	..	..	..	..	..	..	..								
Teddington .. .	34	34	..	40	30	..	fortnightly	..	13	27	..	..	..	..	1	..	1	..	23	2	4	5							
Tottenham .. .	643	577	1,778	56	327	40	Weekly	1,277	283	318	3	377	..	..	86	..	23	6	24	3	16	8				3	7	1	
Twickenham .. .	31	15	several	20	20	18	Weekly	90	15	20	0	10	0	0	0	0	6	5	39	0	10	42 {	Swine fever }	49	49	0	0	0	
Uxbridge .. .	68	..	..	7	3	..	Weekly	3	10	5	..	..	..	..	..	..	1	3	..	..	30								
Wealdstone .. .	6	..	sundry	..	..	..	fortnightly	..	4	4	..	..	..	..	1	..	1	..	5	..	..	1	..	..	..	1	2	0	
Wembley .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..								
Willesden .. .	723	165	..	61	25	74 {	H. to H. Weekly }	126	62	58	*	125*	*	7	9	..	34	7	86	17	21	18	0						
Wood Green .. .	170	129	2,619	2	..	76																						Weekly	90
RURAL.																													
Hendon .. .	48	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	4	6									
Staines .. .	107	63 {	many 10 }	..	..	..	..	..	..	..	..	..	..	..	12	..	..	..	91	12	46	85							
South Mimms .. .	..	..		..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	5	15								
Uxbridge .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..									









